TOSHIBA

FILE NO. 020-200106

SERVICE MANUAL

COLOR TELEVISION

N1F Chassis

32AF41

(TAC0116)

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CHAPTER 1 GENERAL ADJUSTMENTS

SAFETY INSTRUCTIONS

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" INSTRUCTIONS BELOW.

X-RAY RADIATION PRECAUTION

1. Excessive high voltage can produce potentially hazardous X-RAY RADIATION. To avoid such hazards, the high voltage must not be above the specified limit. The nominal value of the high voltage of this receiver is (A) kV at zero beam current (minimum brightness) under a 120V AC power source. The high voltage must not, under any circumstances, exceed (B) kV.

   Refer to table-1 for high voltage (A), (B).
   (See SETTING & ADJUSTING DATA on page 17)

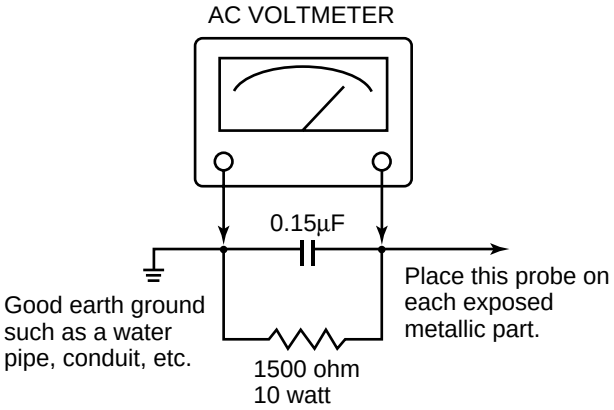
   Each time a receiver requires servicing, the high voltage should be checked following the HIGH VOLTAGE CHECK procedure in this manual. It is recommended that the reading of the high voltage be recorded as a part of the service record. It is important to use an accurate and reliable high voltage meter.
2. This receiver is equipped with a Fail Safe (FS) circuit which prevents the receiver from producing an excessively high voltage even if the B+ voltage increases abnormally. Each time the receiver is serviced, the FS circuit must be checked to determine that the circuit is properly functioning, following the FS CIRCUIT CHECK procedure in this manual.
3. The only source of X-RAY RADIATION in this TV receiver is the picture tube. For continued X-RAY RADIATION protection, the replacement tube must be exactly the same type tube as specified in the parts list.
4. Some part in this receiver have special safety-related characteristics for X-RAY RADIATION protection. For continued safety, parts replacement should be undertaken only after referring to the PRODUCT SAFETY NOTICE below.

SAFETY PRECAUTION

WARNING : Service should not be attempted by anyone unfamiliar with the necessary precautions on this receiver. The following are the necessary precautions to be observed before servicing this chassis.

1. An isolation Transformer should be connected in the power line between the receiver and the AC line before any service is performed on the receiver.
2. Always discharge the picture tube anode to the CRT conductive coating before handling the picture tube. The picture tube is highly evacuated and if broken, glass fragments will be violently expelled. Use shatter proof goggles and keep picture tube away from the unprotected body while handling.
3. When replacing a chassis in the cabinet, always be certain that all the protective devices are put back in place, such as; non-metallic control knobs, insulating covers, shields, isolation resistor-capacitor network etc.
4. Before returning the set to the customer, always perform an AC leakage current check on the exposed metallic parts of the cabinet, such as antennas, terminals, screwheads, metal overlays, control shafts etc. to be sure the set is safe to operate without danger of electrical shock. Plug the AC line cord directly into a 120V AC outlet (do not use a line isolation transformer during this check). Use an AC voltmeter having 5000 ohms per volt or more sensitivity in the following manner:

   Connect a 1500 ohm 10 watt resistor, paralleled by a 0.15 µF, AC type capacitor, between a known good earth ground (water pipe, conduit, etc.) and the exposed metallic parts, one at a time. Measure the AC voltage across the combination of 1500 ohm resistor and 0.15 µF capacitor. Reverse the AC plug at the AC outlet and repeat AC voltage measurements for each exposed metallic part. Voltage measured must not exceed 0.3 volts rms. This corresponds to 0.2 milliamp. AC. Any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.


AC VOLTMETER
0.15µF
Good earth ground such as a water pipe, conduit, etc.
Place this probe on each exposed metallic part.
1500 ohm
10 watt

PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the international hazard symbols on the schematic diagram and the parts list.
Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create shock, fire, X-ray radiation or other hazards.

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE “X-RAY RADIATION PRECAUTION”, “SAFETY PRECAUTION” AND “PRODUCT SAFETY NOTICE” ON PAGE 3 OF THIS MANUAL.

SET-UP ADJUSTMENT (FOR 13”, 14”, 19”, 20”)

■ The following adjustments should be made when a complete realignment is required or a new picture tube is installed. Perform the adjustments in order as follows :

1. Color Purity
2. Convergence
3. White Balance

Note: The PURITY/CONVERGENCE MAGNET assembly and rubber wedges need mechanical positioning. Refer to figure 1.
Mounting position of the purity magnet assembly should fit to same position as old one because slightly difference to the position depend on a kind of tube.

* There are no adjustment of purity and convergence in some picture tube (Unified with purity magnet)

COLOR PURITY ADJUSTMENT

NOTE : Before attempting any purity adjustments, the receiver should be operated for at least fifteen minutes.

1. Demagnetize the picture tube and cabinet using a degaussing coil.
2. Set the brightness and contrast to maximum.
3. Use a green raster from among the built-in test signals.
4. Loosen the clamp screw holding the yoke and slide the yoke backward or forward to provide vertical green belt (zone) in the picture screen.
5. Remove the Rubber Wedges.
6. Rotate and spread the tabs of the purity magnet (See figure 2.) around the neck of the picture tube until the green belt is in the center of the screen. At the same time, enter the raster vertically.
7. Slowly move the yoke forward or backward until a uniform green screen is obtained. Tighten the clamp screw of the yoke temporarily.
8. Check the purity of the red and blue raster.

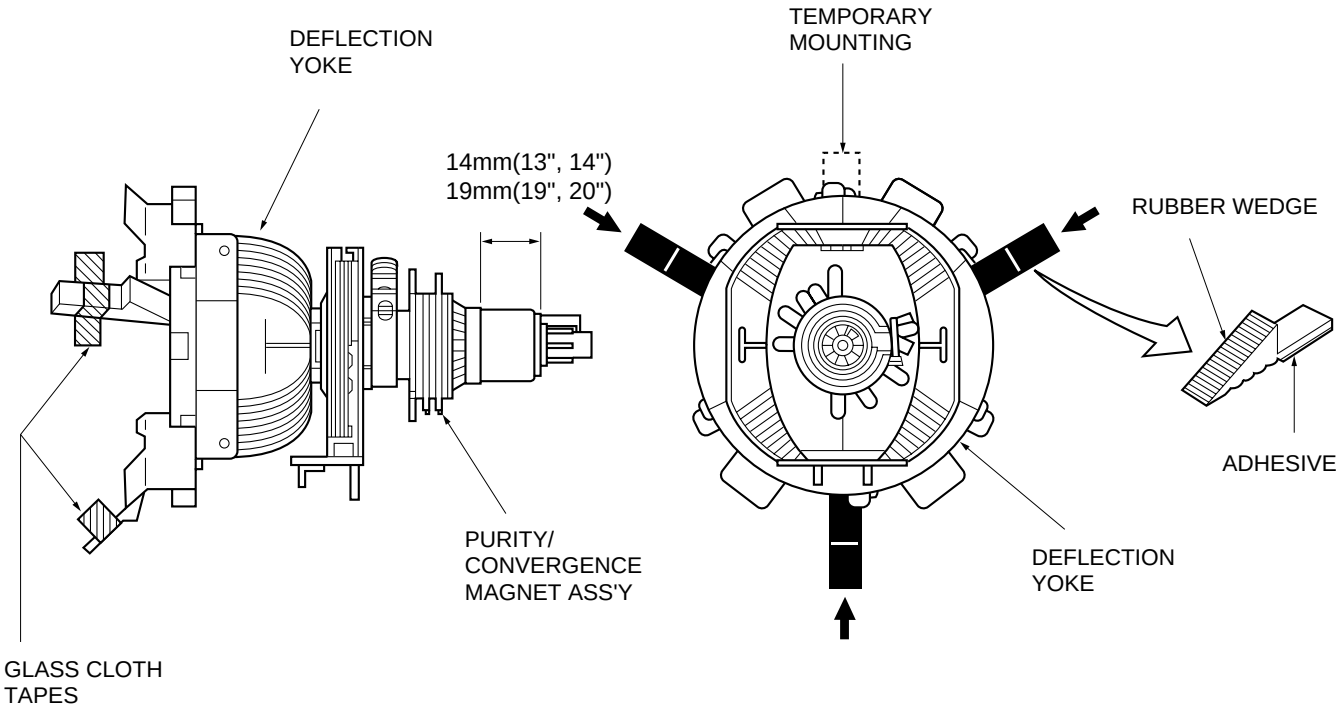


Figure 1.

CONVERGENCE ADJUSTMENTS

NOTE: Before attempting any convergence adjustments, the receiver should be operated for at least fifteen minutes.

■ CENTER CONVERGENCE ADJUSTMENT

1. Use the cross-dot pattern from among the built-in test signals.
2. Set the brightness and contrast for well defined pattern.
3. Adjust two tabs of the 4-Pole Magnets to change the angle between them (See figure 2.) and superimpose red and blue vertical lines in the center area of the picture screen.
4. Turn the both tabs at the same time keeping the angle constant to superimpose red and blue horizontal lines at the center of the screen.
5. Adjust two tabs of 6-Pole Magnets to superimpose red/blue line and green one. Adjusting the angle affects the vertical lines and rotating both magnets affects the horizontal lines.
6. Repeat adjustments 3, 4, 5 keeping in mind red, green and blue movement, because 4-Pole Magnets and 6-Pole Magnets have mutual interaction and make dot movement complex.

■ CIRCUMFERENCE CONVERGENCE ADJUSTMENT

1. Loosen the clamping screw of deflection yoke slightly to allow the yoke to tilt.
2. Temporarily put a wedge as shown in figure 1. (Do not remove cover paper on adhesive part of the wedge.)
3. Tilt front of the deflection yoke up or down to obtain better convergence in circumference. (See figure 3.) Push the mounted wedge into the space between picture tube and the yoke to fix the yoke temporarily.
4. Put other wedge into bottom space and remove the cover paper to stick.
5. Tilt front of the yoke right or left to obtain better convergence in circumference. (See figure 3.)
6. Keep the yoke position and put another wedge in either upper space. Remove cover paper and stick the wedge on picture tube to fix the yoke.
7. Detach the temporarily mounted wedge and put it in another upper space. Stick it on picture tube to fix the yoke.
8. After fixing three wedges, recheck overall convergence. Tighten the screw firmly to fix the yoke and check the yoke is firm.
9. Stick three adhesive tapes on wedges as shown in figure 1.

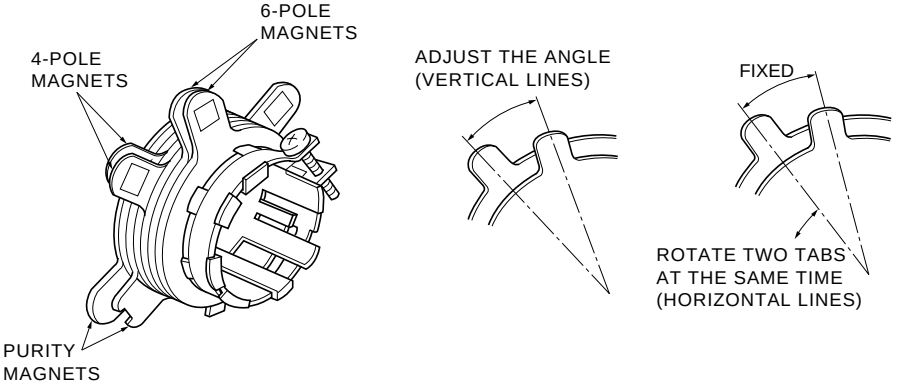
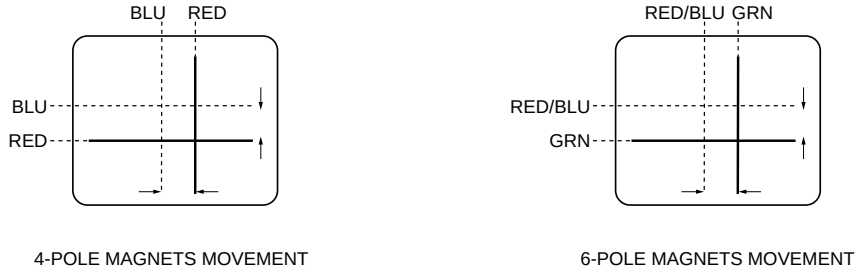


Figure 2.



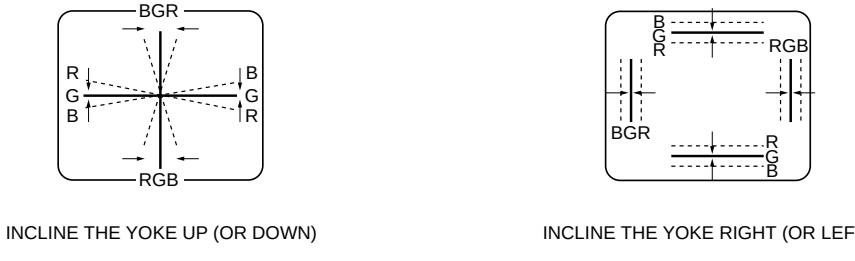


Figure 3. Dot Movement Pattern

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 3 OF THIS MANUAL.

(FOR 35", 36")

■ The following adjustments should be made when a complete realignment is required or a new picture tube is installed. Perform the adjustments in order as follows :

1. Color Purity
2. Convergence
3. White Balance

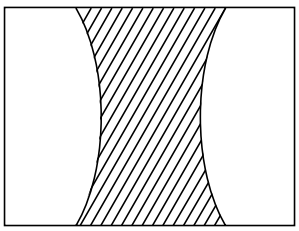
Note: The PURITY/CONVERGENCE MAGNET assembly and rubber wedges need mechanical positioning. Refer to figure 1.
Mounting position of the purity magnet assembly should fit to same position as old one because slightly difference to the position depend on a kind of tube.

* There are no adjustment of purity and convergence in some picture tube (Unified with purity magnet)

COLOR PURITY ADJUSTMENT

NOTE : Before attempting any purity adjustments, the receiver should be operated for at least fifteen minutes.

1. Evenly degauss the entire screen.
2. Set the CONTRAST and BRIGHTNESS Controls to the maximum.
3. Display built-in green raster using the TEST SIGNAL SELECTION function.
4. Loosen the clamp screw holding the deflection yoke (and remove the Rubber Wedges).
5. Slide the yoke forward or backward to provide vertical green belt (zone) in the picture screen.
6. Rotate and spread the tabs of the purity magnet (See figure 3.) around the neck of the picture tube until the green belt is in the center of the screen. At the same time, center the raster vertically by adjusting the magnet as shown below.



Green Belt

7. Move the yoke slowly forward or backward until a uniform green screen is obtained. Tighten the clamp screw of the yoke temporarily.
8. Check the purity of the red and blue raster.
9. Put four wedges into the space between the picture tube and the yoke to hold the yoke in the adjusted position. (See figure 2.)
   Do not tilt the yoke by excessive insertion of the wedge.
10. Remove cover paper of wedge and stick wedges on the tube to fix the yoke in the adjusted position.
    Fix the wedges with glass cloth tapes.

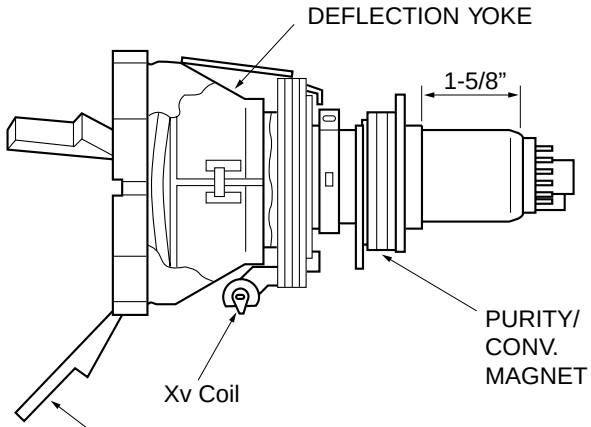


Figure 1.

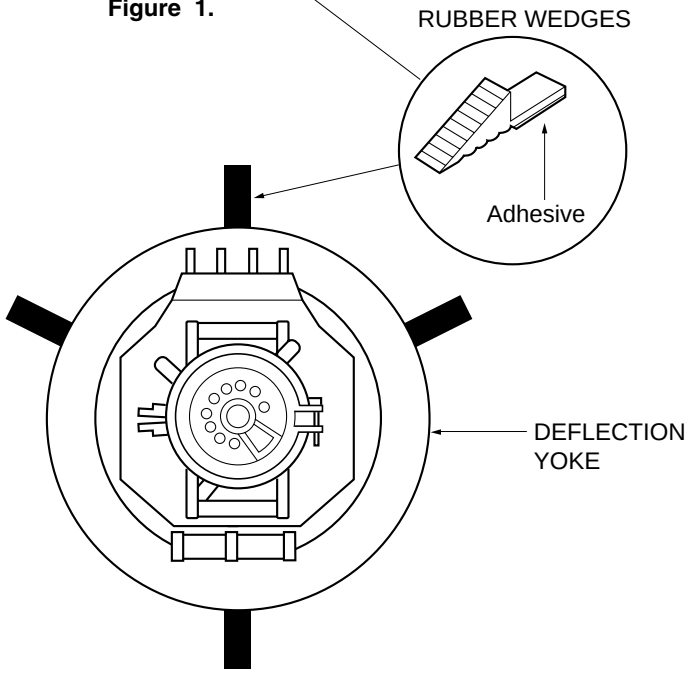


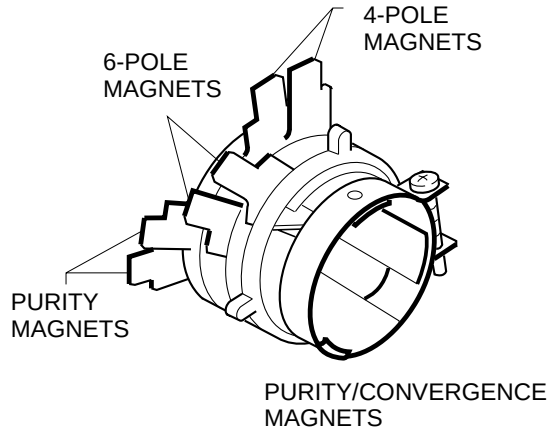
Figure 2.

CONVERGENCE ADJUSTMENTS

NOTE: Before attempting any convergence adjustments, the receiver should be operated for at least fifteen minutes.

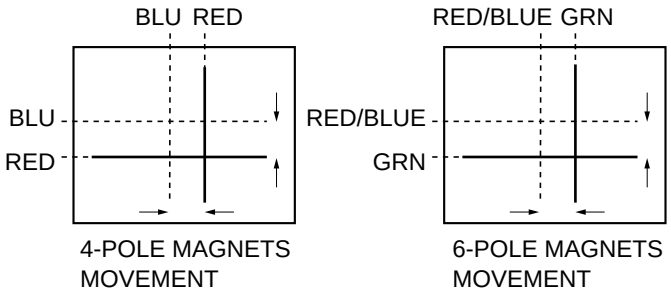
■ CENTER CONVERGENCE ADJUSTMENT

1. Display built-in cross-dot pattern using the TEST SIGNAL SELECTION function.
2. Adjust the BRIGHTNESS and CONTRAST Controls for well defined pattern.
3. Loosen the tightening ring and adjust two tabs of the 4-Pole Magnets to change the angle between them (See figure 3.) and superimpose red and blue vertical lines in the center area of the picture screen. (See figure 4.)
4. Turn the both tabs at the same time keeping the constant angle to superimpose red and blue horizontal lines at the centre of the screen. (See figure 4.)
5. Adjust two tabs of 6-Pole Magnets to superimpose red/blue line with green one. Adjusting the angle affects the vertical lines and rotating both magnets affects the horizontal lines.
6. Repeat adjustments 3, 4, 5 keeping in mind red, green and blue movement, because 4-Pole Magnets and 6-Pole magnets interact and make dot movement complex.
7. After completing the "CENTER CONVERGENCE ADJUSTMENT" tighten the tightening ring to fix the magnets.



ADJUSTMENT OF MAGNETS

Figure 3.



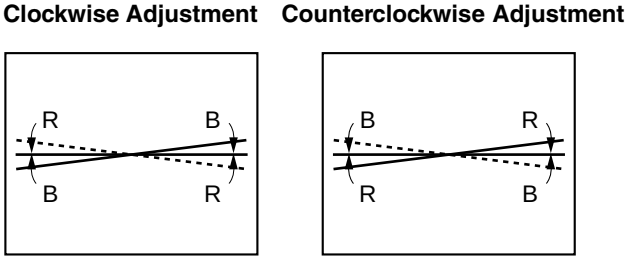
Center Convergence by Convergence Magnets

Figure 4.

■ Xv COIL ADJUSTMENT

Adjust the Xv coil (on the deflection yoke) to correct misconvergence at both sides on screen.

Use a hexagonal tip stick (plastic) to adjust the core of coil.

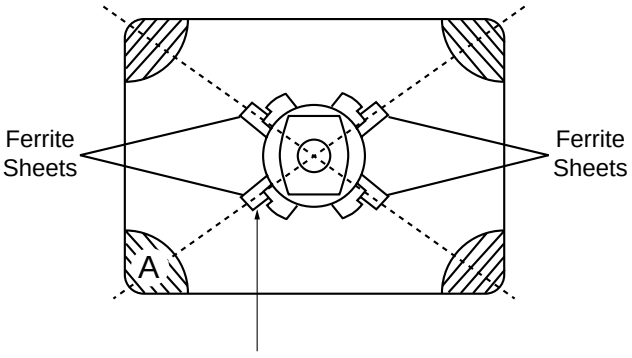


X_V Cross Pattern View

■ SCREEN-CORNER CONVERGENCE

When the misconvergence is still evident on corners even though the above adjustment is done, use the ferrite sheet (Part No. 23993622) to correct misconvergence.

1. Put ferrite sheets into the space under the yoke. Decide such position that misconvergence becomes minimum, watching picture screen. (See figure below.)
2. Remove cover paper of ferrite sheet to stick it in the place on the tube. Put adhesive tapes on ferrite sheets to fix.



SERVICE MODE

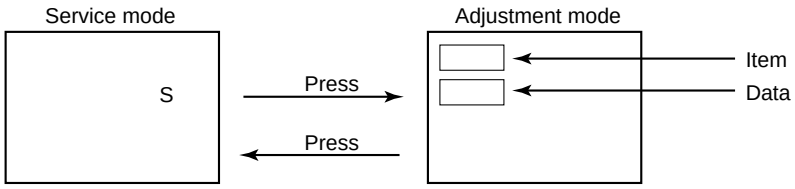
1. ENTERING TO SERVICE MODE

1) Press MUTE button once on Remote Control.
2) Press MUTE button again to keep pressing.
3) While pressing the MUTE button, press MENU button on TV set.

(Service mode display)

2. DISPLAYING THE ADJUSTMENT MENU

1) Press MENU button on TV.



3. KEY FUNCTION IN THE SERVICE MODE

The following key entry during display of adjustment menu provides special functions.

A single horizontal line ON/OFF:	TV (ANT)/VIDEO button (on TV)
Test signal selection :	TV (ANT)/VIDEO button (on Remote)
Selection of the adjustment items :	Channel ▲/▼ (on TV or Remote)
Change of the data value :	Volume ▲/▼ (on TV or Remote)
Adjustment menu mode ON/OFF :	MENU button (on TV)
Initialization of the memory (QA02) :	RECALL+Channel button on TV (▲)
Initialization of the self diagnostic data:	RECALL+Channel button on TV (▼)

“RCUT” selection :	1 button
“GCUT” selection :	2 button
“BCUT” selection :	3 button
“CNTX” selection :	4 button
“COLC” selection :	5 button
“TNTC” selection :	6 button
Test audio signal ON/OFF (1kHz) :	8 button
Self diagnostic display ON/OFF :	9 button

4. SELECTING THE ADJUSTING ITEMS

1) Every pressing of CHANNEL ▲ button in the service mode changes the adjustment items in the order of table-2. (▼ button for reverse order)

Refer to table-2 for preset data of adjustment mode.
(See SETTING & ADJUSTING DATA on page 17)

5. ADJUSTING THE DATA

1) Pressing of VOLUME ▲ or ▼ button will change the value of data in the range from 00H to FFH. The variable range depends on the adjusting item.

6. EXIT FROM SERVICE MODE

1) Pressing POWER button to turn off the TV once.

■ INITIALIZATION OF MEMORY DATA OF QA02

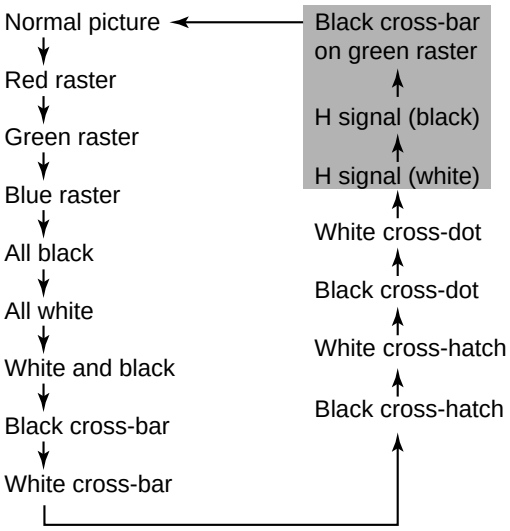
After replacing QA02, the following initialization is required.

1. Enter the service mode, then select any register item.
2. Press and hold the RECALL button on the Remote, then press the CHANNEL ▲ button on the TV. The initialization of QA02 has been complated.
3. Check the picture carefully. If necessary, adjust any adjustment item above. Perform “Programming Channel Memory” on the owner’s manual.

CAUTION: Never attempt to initialize the data unless QA02 has been replaced.

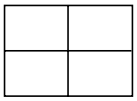
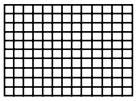
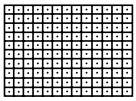
7. TEST SIGNAL SELECTION

1) Every pressing of TV/VIDEO button on the Remote Control in the Service mode, changes the built-in test patterns on screen in the following order.



2) Press “8” button while any built-in test pattern to on the screen to output the 1 kHz sound. Press the button again to cut off the sound.

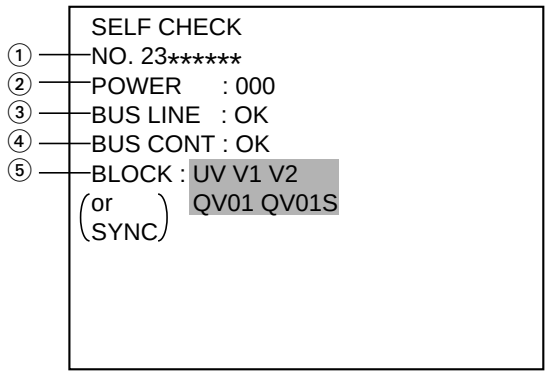
Note: If the video cable is connected to the VIDEO1 INPUT jack, the built-in pattern signals are not displayed.

Signals	Picture
• Red raster • Green raster • Blue raster • All Black • All White	
• Black & White	
• Black cross-bar • White cross-bar • Black cross-bar on green raster	
• Black cross-hatch • White cross-hatch	
• Black cross-dot • White cross-dot	
• H signal (white) • H signal (black)	

* The signals marked with ▒ are not usable to display in the Test signal for some model.

8. SELF DIAGNOSTIC FUNCTION

1) Press “9” button on Remote Control during display of adjustment menu in the service mode.
   The diagnosis will begin to check if interface among IC’s are executed properly.
2) During diagnosis, the following displays are shown.



① Part number of microprocessor (QA01)
② Operation number of protection circuit (current limiter) . . . . “000” is normal.
③ BUS line check
- “OK” ..... Normal
- “SCL-GND” ..... SCL-GND short circuit
- “SDA-GND” ..... SDA-GND short circuit
- “SCL-SDA” ..... SCL-SDA short circuit

④ BUS line ACK (acknowledge) check
- “OK” ..... Normal
- Display of Location Number . . . . NG
  (Display example)
  “QA02 NG”, “H001 NG”, “Q501 NG” etc.
- Note: The indication of failure place is only one place though failure places are plural. When repair of a failure place finishes, the next failure place is indicated. (The order of priority of indication is left side.)

⑤ Sync. signal check
- Green display ..... Normal
- Cyan display ..... No check
- Red display ..... NG

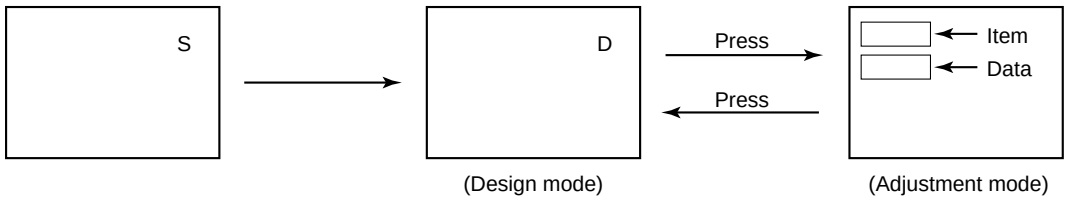
UV ..... TV mode
V1 ..... VIDEO 1 mode
V2 ..... VIDEO 2 mode

* The item marked with ▒ are not usable to display in the SELF DIAGNOSTIC FUNCTION for some model.

DESIGN MODE

1. ENTERING TO DESIGN MODE

1) Select the Service mode. 2) While pressing RECALL button on Remote and press MENU button on TV. 3) Press MENU button on TV.



When QA02 is initialized, items “OPT0” and “OPT1” of DESIGN MODE are set to the data of the representative model of this chassis family.
Therefore, because ON-SCREEN specification remains in the state of the representative of model. This model is required to reset the data of items “OPT0” and “OPT1”.

2. SELECTING THE ADJUSTING ITEMS

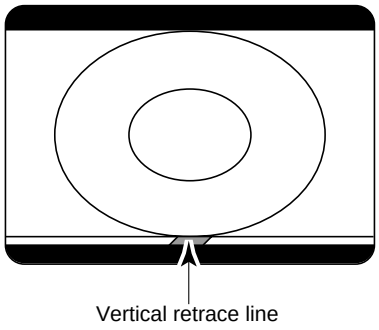
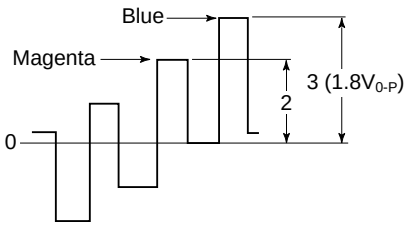
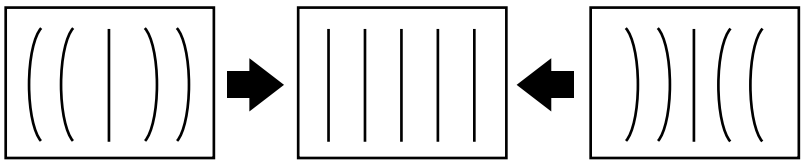
Every pressing of CHANNEL ▼ button in the design mode changes the adjustment items in the order of table-3.
(▲ button for reverse order)

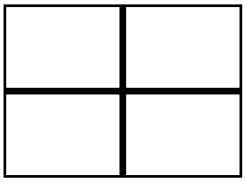
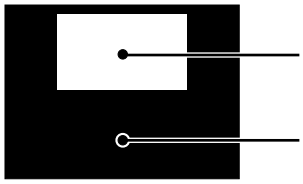
Refer to table-3 for data of design mode.
(See SETTING & ADJUSTING DATA on page 17)

3. ADJUSTING THE DATA

Pressing of VOLUME ▲ or ▼ button will change the value of data.

ELECTRICAL ADJUSTMENT

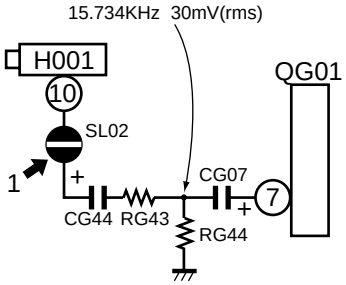
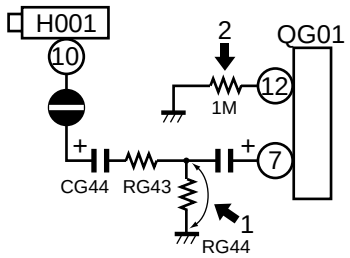
ITEM	ADJUSTMENT PROCEDURE
FOCUS VR ADJ	1. Enter the service mode, then select any register item. 2. Press the TV/VIDEO button on the Remote until the black cross-bar pattern appears on the screen. 3. Adjust the FOCUS control (on T461) for well defined scanning lines on the picture screen.
SUB-BRIGHTNESS (BRTC)	1. Constrict the picture height until the vertical retrace line appears adjusting the HEIGHT control on the MAIN board. 2. Adjust the CONTRAST to the minimum and BRIGHTNESS to the center. 3. Enter the service mode, then select "**BRTC**" register. 4. Adjust the data value so the belt of vertical retrace line just disappear. 5. Adjust the CONTRAST for the desired contrast. 6. Adjust the HEIGHT control. 
SUB-COLOR (COLC) SUB-TINT (TNTC)	1. Receive color-bar signal from color-bar generator. 2. Press the RESET button. 3. Connect oscilloscope to base of Q906 on CRT-D board. 4. Enter the service mode, then select "**COLC**". 5. Adjust the SUB-COLOR by pressing the VOLUME ▲ or ▼ button to achieve about $1V_{0\text{-}p}$ of blue bar. 6. Select "**TNTC**" register. 7. Adjust the data value to obtain the blue bar to magenta bar ratio of 3:2 as shown. 8. Select "**COLC**" register. 9. Adjust the data value to achieve $1.8V_{0\text{-}p}$ of blue bar on scope. 10. Check the picture with off-air signal. 
WIDTH (WID)	1. Call up the adjustment mode display, then select the item **WID**. 2. Press the VOLUME ▲ or ▼ button to get the picture so the left and right edges of raster begins to lack. 3. Press the VOLUME ▲ or ▼ button to advance the data by 7 steps. Note : Check the horizontal picture position is correct.
E-W PARABOLA (DPC)	1. Call up the adjustment mode display, then select the item **DPC**. 2. Press the TV/VIDEO button on Remote until the cross-hatch pattern appears on the screen. 3. Press the VOLUME ▲ or ▼ button to make vertical lines straight as shown below. 

<table>
<tr><th>ITEM</th><th>ADJUSTMENT PROCEDURE</th></tr>
<tr><td>HORIZONTAL POSITION
(HPOS)
VERTICAL POSITION
(VPOS)</td><td>1. Call up the adjustment mode display, then select the item HPOS or VPOS.
2. Press the TV/VIDEO button on Remote until the white cross-bar or black cross-bar pattern appears on the screen.
3. Adjust the HORIZONTAL and VERTICAL position alternately by pressing the VOLUME ▲ or ▼ button for proper picture position.
4. Check the picture with off-air signal.
  </td></tr>
<tr><td>HEIGHT
(HIT)</td><td>1. Call up the adjustment mode display, then select the item HIT.
2. Press the VOLUME ▲ or ▼ button to get the picture so the top of raster begins to lack.
3. Press the VOLUME ▲ button to advance the data by 9 steps.
Note : Check the vertical picture position is correct.</td></tr>
<tr><td>WHITE BALANCE
(RCUT)
(GCUT)
(BCUT)
(GDRV)
(BDRV)</td><td>1. Adjust the CONTRAST control to the center, and BRIGHTNESS control to the maximum.
2. Call up the adjustment mode display, and press the TV/VIDEO button on Remote until the white and black pattern appears on the screen.
3. Adjust the following item with the CHANNEL ▲/▼ and VOLUME ▲/▼ buttons.
RCUT ⟶ Data : 40H
GCUT ⟶ Data : 40H
BCUT ⟶ Data : 40H
GDRV ⟶ Data : 40H
BDRV ⟶ Data : 40H
4. Press the TV/VIDEO button on TV to display a single horizontal line on the screen.
5. Turn the SCREEN control (FBT) fully counterclockwise and gradually rotate clockwise until the first horizontal line appears slightly on the screen.
6. Press the TV/VIDEO button to display the normal picture.
7. Adjust the remaining two “?CUT” items (CHANNEL ▲/▼ → TV/VIDEO → VOLUME ▲/▼ in order) to obtain the slightly lighted horizontal line in the same levels of three (red, green, blue) colors. The line should be white if the adjustments are proper.
 
Bright area
Adjust "GDRV" or "BDRV" to be white.
Dark area
Fine adjust "RCUT", "GCUT" or "BCUT" to be black.</td></tr>
<tr><td>PIP SUB-BRIGHTNESS
(PBOF)</td><td rowspan="3">Adjust to match the PIP screen to the brightness, white balance and tint of the main picture.</td></tr>
<tr><td>PIP WHITE BALANCE
(PGOF, PROF)</td></tr>
<tr><td>PIP SUB-TINT
(PHUE)</td></tr>
</table>

MTS ADJUSTMENT (FOR N1F CHASSIS)

No.	ITEM	INPUT SIGNAL	ADJUSTMENT PROCEDURE
1	STEREO VCO (STVC)	• No signal	1. Display item **STVC**, and connect pin 9 of H002 to ground. 2. Connect frequency counter to pin 12 of H002. 3. Change data by Volume ▲/▼ buttons so that the reading of counter becomes value as close as 4fH (62.936kHz).
2	SAP VCO (SAVC)	• 78.670kHz 147mVrms → pin 9 of H002 • Monaural signal → ANT	1. Display item SAVC. 2. Change data by Volume ▲/▼ buttons so that the data becomes in the center of range for STA7=0 and STA8=1. SAVC 88H STA7:0 STA8:1
3	STEREO FILTER (STRF)	• 9.4kHz 600mVrm → pin 9 of H002 Monaural signal → ANT	1. Display item **STRF** on screen. 2. Change data by Volume ▲/▼ buttons so that the data becomes in the center of range for STA3=1. STRF 16H STA3:1
4	SAP FILTER (SAPF)	• 88kHz 110mVrms → pin 9 of H002 • Monaural signal → ANT	1. Display item **SAPF**. 2. Change data by Volume ▲/▼ buttons so that the data becomes in the center of range for STA4=1. SAPF 98H STA4:1
5	ATTENUATOR (ATT)	• 1kHz 30% mod. → ANT terminal	1. Connect rms meter to pin 12 of H002. 2. Display item **ATT** on screen. 3. Change data by Volume ▲/▼ buttons so that output at pin 12 of H002 becomes value as close as 130mVrms.
6	STEREO SEPARATION (WBAN)	• STEREO 300Hz R-channel only → ANT	1. Select “STEREO” mode from the MTS function in the Audio menu. 2. Display item **WBAN** on screen. 3. Connect oscilloscope to pin 14 of H002. 4. Change data by Volume ▲/▼ buttons so that 300Hz element on scope becomes minimum.
	(SPEC)	• STEREO 3kHz R-channel only → ANT	5. Display item **SPEC** on screen. 6. Change data by Volume ▲/▼ buttons so that 3kHz element on scope becomes minimum.

MTS ADJUSTMENT (FOR N0ES CHASSIS)

No.	ITEM	INPUT SIGNAL	ADJUSTMENT PROCEDURE
1	ATTENUATOR (ATT)	• 1kHz 30% mod. → ANT terminal	1. Connect rms meter to pin 34 of QG01. 2. Display item **ATT** on screen. 3. Change data by VOLUME ▲/▼ buttons so that the reading of meter becomes value as close as 137mVrms.
2	STEREO VCO (STVC)	• No signal	1. Short circuit RG44 with a jumper wire. 2. Display item **STVC** on screen. 3. Connect frequency counter to pin 34 of QG01. 4. Change data by VOLUME ▲/▼ buttons so that the reading of counter becomes value as close as 15.73kHz.
3	STEREO FILTER (STRF)	• 15.734kHz 30mV(rms) 	1. Unsolder the solder link SL02. 2. Display item **STRF** on screen. 3. Connect oscilloscope to pin 34 of QG01. 4. Change data by VOLUME ▲/▼ button to minimize AC output level on scope. 5. Resolder SL02.
4	STEREO SEPARATION (WBAN)	• STEREO 300Hz R-channel only → ANT	1. Display item **WBAN** on screen. 2. Connect oscilloscope to pin 35 of QG01. 3. Change data by VOLUME ▲/▼ buttons so that 300Hz element on scope becomes minimum.
	(SPEC)	• STEREO 3kHz R-channel only → ANT	4. Display item **SPEC** on screen. 5. Change data by Volume ▲/▼ buttons so that 3kHz element on scope becomes minimum.
5	SAP VCO (SAVC)	• No signal 	1. Shortcircuit RG44 with a short jumper. 2. Connect 1Mohm resistor between pin 12 of QG01 and ground. 3. Display item **SAVC** on screen. 4. Connect frequency counter to pin 34 of QG01. 5. Change data by VOLUME ▲/▼ buttons so that the reading of counter becomes value as close as 78.67kHz. 6. Remove the short jumper and 1M ohm resistor.

CIRCUIT CHECKS

HIGH VOLTAGE CHECK

CAUTION: There is no HIGH VOLTAGE ADJUSTMENT on this chassis. Checking should be done following the steps below.

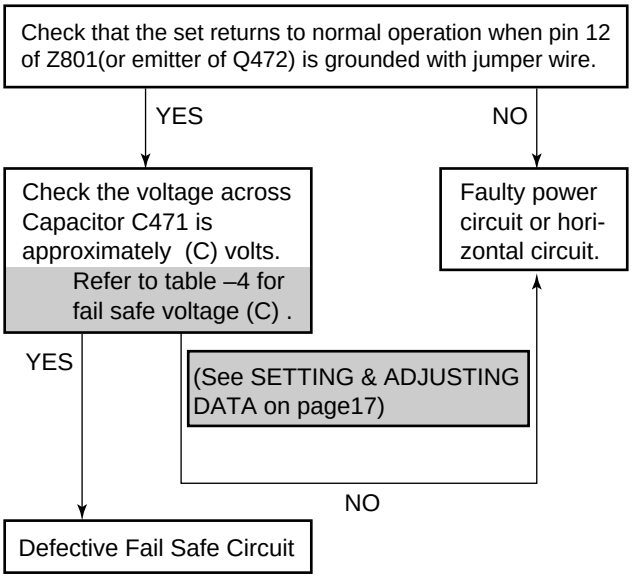
1. Connect an accurate high voltage meter to the second anode of the picture tube.
2. Turn on the receiver. Set the BRIGHTNESS and CONTRAST controls to minimum (zero beam current).
3. High voltage must be measured below (B) kV.
   Refer to table-1 for high voltage (B).
   (See SETTING & ADJUSTING DATA on page 17)
4. Vary the BRIGHTNESS control to both extremes to be sure the high voltage does not exceed the limit under any conditions.

FS CIRCUIT CHECK

The Fail Safe (FS) circuit check is indispensable for the final check in servicing. Checking should be done following the steps below.

1. Turn the receiver on and press the RESET button.
2. Temporarily short TP-(R) and TP-(X) with a jumper wire. Raster and sound will disappear.
3. The receiver must remain in this state even after removing the jumper wire. This is the evidence that the FS circuit is functioning properly.
4. To obtain a picture again, temporarily turn the receiver off and allow the FS circuit more than 5 seconds to reset. Then turn the power switch on to produce a normal picture.

Troubleshooting Guide for Fail Safe Circuit


Check that the set returns to normal operation when pin 12 of Z801(or emitter of Q472) is grounded with jumper wire.
YES
NO
Check the voltage across Capacitor C471 is approximately (C) volts.
Refer to table –4 for fail safe voltage (C) .
Faulty power circuit or horizontal circuit.
YES
(See SETTING & ADJUSTING DATA on page17)
NO
Defective Fail Safe Circuit

CHAPTER 2 SPECIFIC INFORMATIONS

SETTING & ADJUSTING DATA

【SAFETY INSTRUCTIONS】

		32"
HIGH VOLTAGE AT ZERO BEAM:	(A)	31.0kV
MAX HIGH VOLTAGE:	(B)	32.4 kV

Table-1

【SERVICE MODE】

ADJUSTING ITEMS AND DATAS IN THE SERVICE MODE:

Item	Name of adjustment	Preset	32"
RCUT	R CUTOFF	40H	←
GCUT	G CUTOFF	40H	←
BCUT	B CUTOFF	40H	←
GDRV	G DRIVE	40H	←
BDRV	B DRIVE	40H	←
SCNT	SUB-CONTRAST	0AH	←
BRTC	SUB-BRIGHT	40H	←
COLC	SUB-COLOR	3AH	←
TNTC	SUB-TINT	44H	←
SAVC	SAP VCO	20H	←
ATT	ATTENUATOR	20H	←
SAPF	SAP FILTER	88H	←
STVC	STEREO VCO	20H	←
STRF	STEREO FILTER	20H	←
SPEC	SPECTRAL	20H	←
WBAN	STEREO SEPARATION	20H	←
HPOS	HORIZ. POSITION	16H	←
VPOS	VERT. POSITION	03H	←

Item	Name of adjustment	Preset	32"
HIT	HEIGHT	26H	←
LIN	V-LINEARITY	07H	←
VSC	V-S CORRECTION	02H	←
VPS	V-SHIFT	01H	←
VCP	V-COMPENSATION	03H	←
WID	PICTURE WIDTH	35H	←
DPC	E-W PARABOLA (DPC)	17H	←
CNR	E-W CORNER	09H	←
TRAP	TRAPEZIUM	08H	←
HCP	H-COMPENSATION	00H	←
VFC	V-F CORRECTION	0FH	←
PCOL	PIP COLOR	0FH	←
PHUE	PIP TINT	11H	←
PGOF	PIP	36H	←
PROF	PIP	17H	←
PBOF	PIP	17H	←
RGBB	RGB BRIGHT	0BH	←

Table-2

【DESIGN MODE】

ADJUSTING ITEMS AND DATAS IN THE DESIGN MODE:

Item	Name of adjustment	Preset Data	Data	Remarks
			32"	
OPT1	OPTION1	84H	84H	
OPT2	OPTION2	01H	01H	

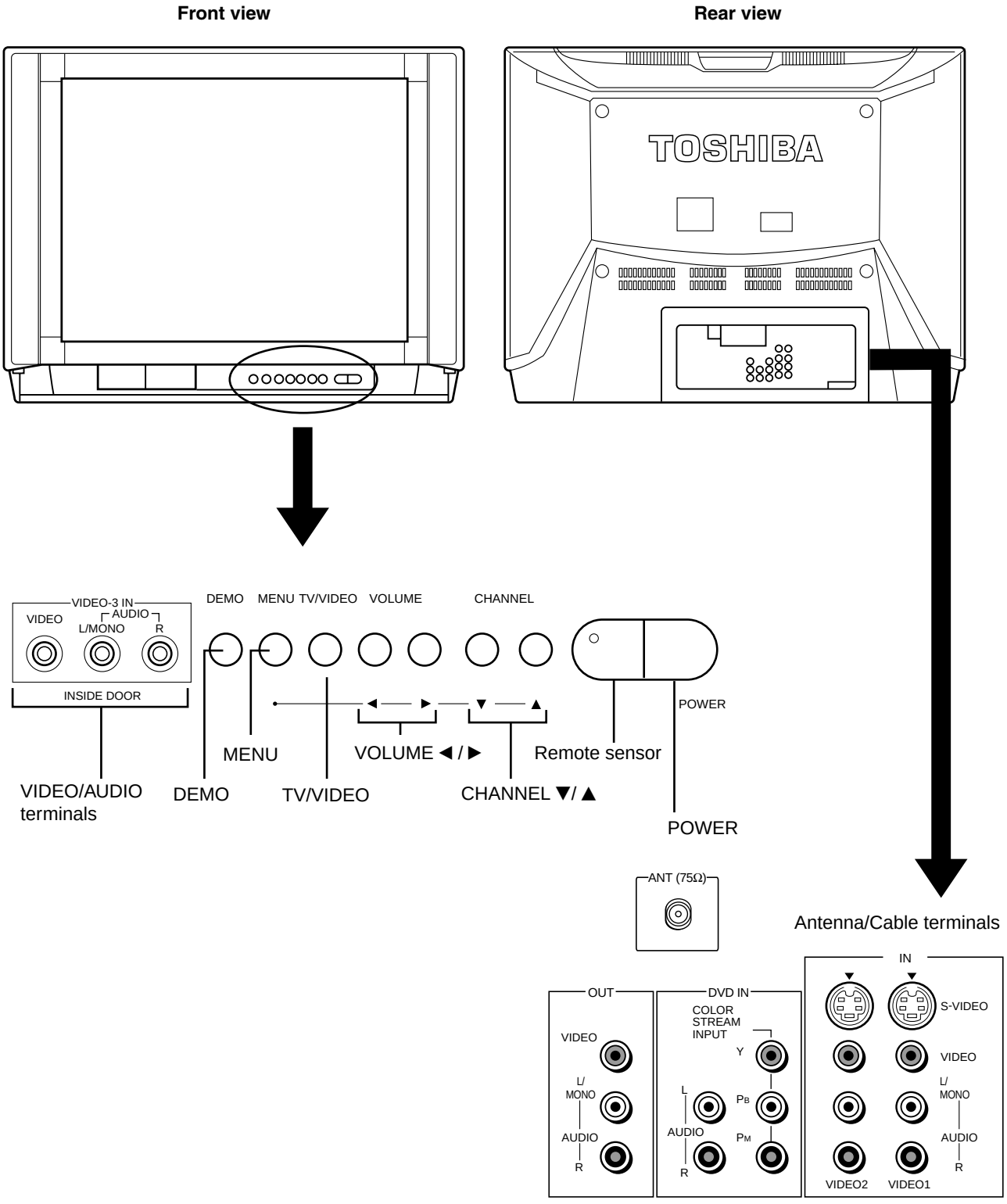
Table-3

【CIRCUIT CHECKS】

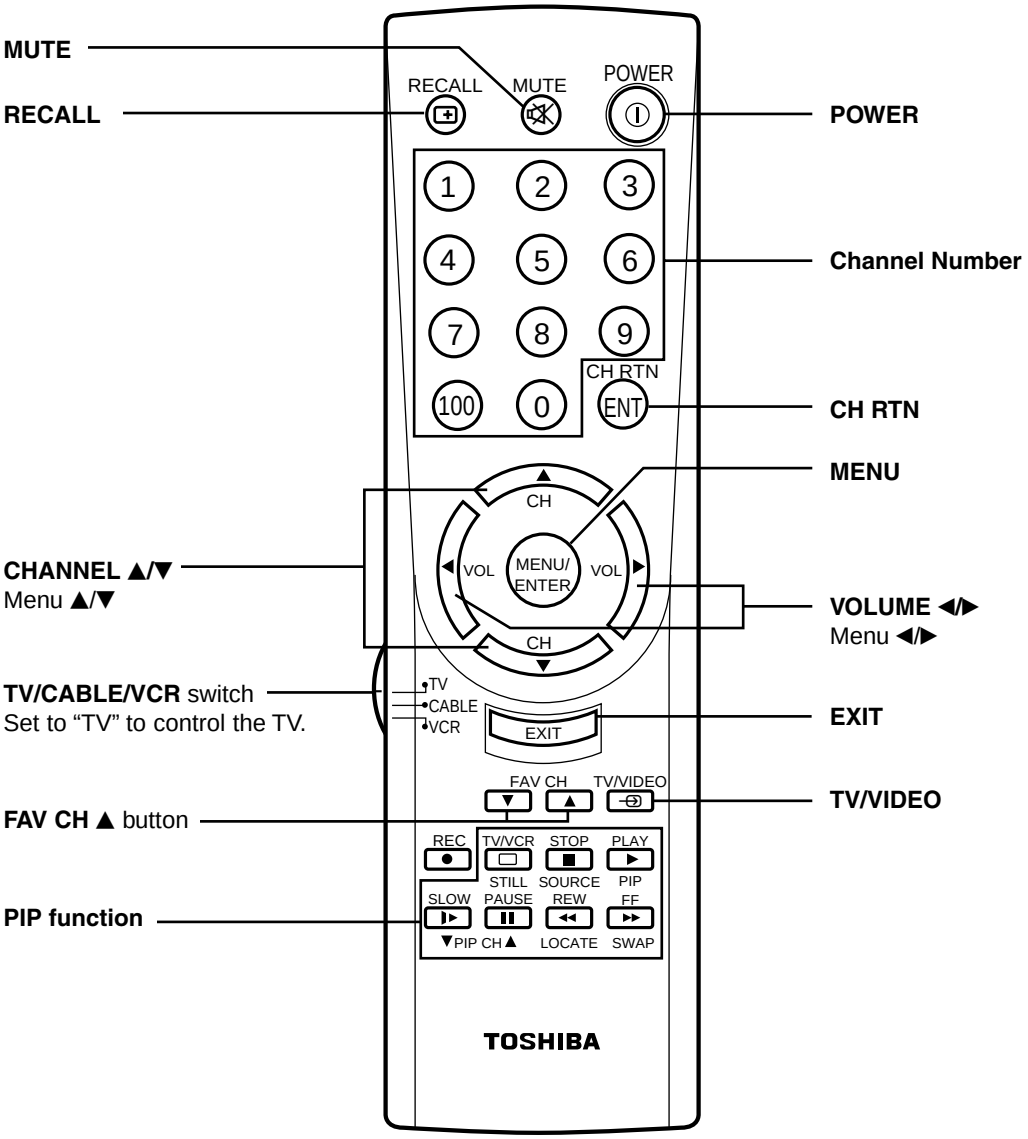
		32"
FBT DETECTION VOLTAGE	(C)	21.88 V

Table-4

LOCATION OF CONTROLS



Remote Control



PROGRAMMING CHANNEL MEMORY

The channel memory is the list of TV channel numbers your TV will stop on when you press the CHANNEL ▲ or ▼ button.
First, use the TV/CABLE and CH PROGRAM functions to preset all active channels in your area automatically.
If necessary, arrange the preset channels with the ADD/ERASE functions so that you can tune into only desired channels.
Note: If you utilize both ANT-1 and ANT-2 terminals for some model, perform programming channels for each input source.

TV/CABLE function

1. Press **MENU**, then press ▶ or ◀ until the SET UP menu appears.
2. Press ▼ (or ▲) until “TV/CABLE” is highlighted.
3. Press ▶ or ◀ to highlight either “TV” or “CABLE”, whichever you use.

CH PROGRAM function

1. Select “CH PROGRAM” following steps 1 and 2 above.
2. Press ▶ or ◀ to start channel programming.
   The TV will automatically cycle through all the TV or CABLE channels selected by the TV/CABLE function, and store active channels in the channel memory.
3. When channel programming is complete, you will see the message to the right appears.
4. Press **CHANNEL** ▲ or ▼ to make sure the channel programming has been done properly.

ADD/ERASE function

After performing the CH PROGRAM function, you can add or erase specific channels.

1. Select the channel you want to erase using the **CHANNEL** ▲ or ▼ button, or select the channel you want to add using the **Channel Number** buttons.
2. Press **MENU**, then press ▶ or ◀ until the SET UP menu appears.
3. Press ▼ (or ▲) until “ADD/ERASE” is highlighted.
4. Press ▶ or ◀ :
   To erase the channel
   Press the button until “ERASE” is highlighted.

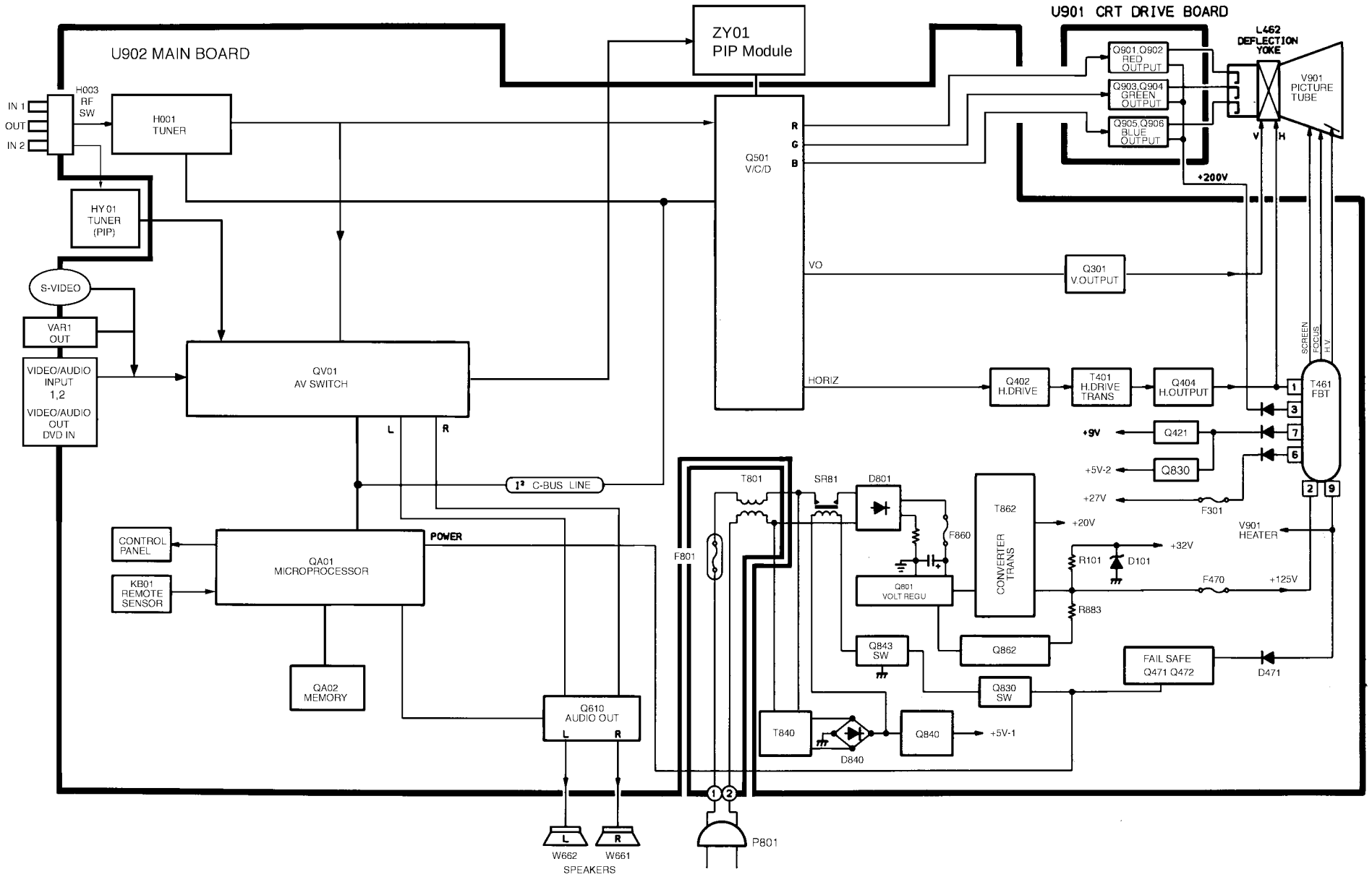
   To add the channel
   Press the button until “ADD” is highlighted.
5. Repeat steps 1 to 4 for other channels.

You have now completed the channel programming.

Note: The CHANNEL ▼/▲ buttons on the TV function as the ▼/▲ buttons while a menu is on the screen.

*Please refer to owner's manual in detail.

CIRCUIT BLOCK DIAGRAM



CHASSIS AND CABINET REPLACEMENT PARTS LIST

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 3 OF THIS MANUAL.

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE. Do not degrade the safety of the receiver through improper servicing.

NOTICE:
- *The part number must be used when ordering parts, in order to assist in processing, be sure to include the Model number and Description.*
- *The PC board assembly with ∗ mark is no longer available after the end of the production.*

Model : 32AF41

Capacitors	CD	: Ceramic Disk	PF	: Plastic Film	EL	: Electrolytic
Resistors	CF	: Carbon Film	CC	: Carbon Composition	MF	: Metal Film
	OMF	: Oxide Metal Film	VR	: Variable Resistor	FR	: Fusible Resistor

(All CD and PF capacitors are ±5%, 50V and all resistors, ±5%, 1/6W unless otherwise noted.)

Location No.	Part No.	Description
		CAPACITORS
C102	24793221	CAPACITOR, ELECTROLYTIC CE04G 10V 220UF M
C105	24212102	CAPACITOR, CERAMIC DISK CK45 B 50V 1000PF K
C106	24797479	CAPACITOR, ELECTROLYTIC CE04G 50V 4.7UF M
C107	24763221	CAPACITOR, ELECTROLYTIC, 16V 220UF M
C110	24794470	CAPACITOR, ELECTORLYTIC CE04G 16V 47UF M
C201	24503041	CAPACITOR, MT PLA CAP 63V 0.1UF J
C204	24797010	CAPACITOR, ELECTROLYTIC CE04G 50V 1.0UF M
C205	24794100	CAPACITOR, ELECTROLYTIC CE04G 16V 10UF M
C207	24436270	CAPASITOR, CERAMIC DISC CC45SL 50V 27PFJ
C208	24436270	CAPASITOR, CERAMIC DISC CC45SL 50V 27PFJ
C209	24436270	CAPASITOR, CERAMIC DISC CC45SL 50V 27PFJ
C213	24503041	CAPACITOR, MT PLA CAP 63V 0.1UF J
C216	24797100	CAPACITOR, ELECTROLYTIC CE04G 50V 10UF M
C220	24539474	CAPACITOR, MT PLA CAP M 50V 474J MUL
C220	24797229	CAPACITOR, ELECTROLYTIC CE04G 50V 2.2UF M
C224	24503041	CAPACITOR, MT PLA CAP 63V 0.1UF J
C225	24503041	CAPACITOR, MT PLA CAP 63V 0.1UF J
C226	24503041	CAPACITOR, MT PLA CAP 63V 0.1UF J
C245	24206108	CAPACITOR, ELECTROLYTIC CE04WS 50V 0.1UF M 7L 3A
C261	24503041	CAPACITOR, MT PLA CAP 63V 0.1UF J
C262	24503041	CAPACITOR, MT PLA CAP 63V 0.1UF J
C263	24503041	CAPACITOR, MT PLA CAP 63V 0.1UF J
C300	24503041	CAPACITOR, MT PLA CAP 63V 0.1UF J
C304	24693473	CAPACITOR, PLASTIC FILM CQ921 M 100V 0.047MF J
C306	24073059	CAPACITOR, ELECTROLYTIC CE04P 25V 3300UF M 3A
C308	24797221	CAPACITOR, ELECTROLYTIC CE04G 50V 220UF M
C310	24073094	CAPACITOR, ELECTROLYTIC CE04P 50V 1000UF M 3A
C312	24503037	CAPACITOR, MT PLA CAP 63V 0.047UF J

	Location No.	Part No.	Description
	C312	24503039	CAPACITOR, MT PLA CAP 63V 0.068UF J
	C313	24082057	CAPACITOR, PLASTIC FILM CF922 M 100V 220000PF J
	C314	24793101	CAPACITOR, ELECTROLYTIC CE04G 10V 100UF M
	C316	24212222	CAPACITOR, CERAMIC DISK CK45 B 50V 2200PF K
	C317	24214471	CAPACITOR, CERAMIC DISK CK45 B 500V 470PF K
	C318	24073041	CAPACITOR, ELECTROLYTIC CE04P 16V 470UF M 3A
	C319	24212102	CAPACITOR, CERAMIC DISK CK45 B 50V 1000PF K
	C320	24669101	CAPACITOR, ELECTROLYTIC CE04Q 50V 100UF M 3A
	C326	24503041	CAPACITOR, MT PLA CAP 63V 0.1UF J
	C327	24436471	CAPACITOR, CERAMIC DISC CC45 SL 50V470PF J
	C328	24212472	CAPACIT0R, CERAMIC DISK CK45 B 50V 4700PF K
	C328	24591433	CAPACITOR, PLASTIC FILM CQ921 M 50V 0.043MF J
	C337	24797229	CAPACITOR, ELECTROLYTIC CE04G 50V 2.2UF M
	C352	24617915	CAPACITOR, ELECTROLYTIC CE04CH 50V 1.0UF K 3A LI
	C360	24793221	CAPACITOR, ELECTROLYTIC CE04G 10V 220UF M
	C361	24794101	CAPACITOR, ELECTROLYTIC CE04G 16V 100UF M
	C365	24503037	CAPACITOR, MT PLA CAP 63V 0.047UF J
	C366	24693154	CAPACITOR, PLASTIC FILM CQ921 M 100V 0.15MF J
	C370	24668101	CAPACITOR, ELECTROLYTIC CE04Q 35V 100UF M 3A
	C371	24668100	CAPACITOR, ELECTROLYTIC CE04Q 35V 10UF M 3A
	C391	24666100	CAPACITOR, ELECTROLYTIC CE04Q 10V 10UF M 3A
	C393	24666100	CAPACITOR, ELECTROLYTIC CE04Q 10V 10UF M 3A
	C396	24082825	CAPACITOR, PLASTIC FILM CF92 T 1800VH 1800PF H
	C399	24085981	CAPACITOR, ELEC. NONPOLAR CE04J 16V 10UF M 11L NP
	C400	24503041	CAPACITOR, MT PLA CAP 63V 0.1UF J
	C403	24591103	CAPACITOR, PLASTIC FILM CQ921 M 50V 0.01MF J
	C404	24797010	CAPACITOR, ELECTROLYTIC CE04G 50V 1.0UF M
	C407	24503041	CAPACITOR, MT PLA CAP 63V 0.1UF J
	C409	24763221	CAPACITOR, ELECTROLYTIC, 16V 220UF M
	C409	24763221	CAPACITOR, ELECTROLYTIC, 16V 220UF M
	C413	24214821	CAPACITOR, CERAMIC DISK CK45 B 500V 820PF K
	C415	24567273	CAPACITOR, PLASTIC FILM CF92 M 50V 27000PF J
	C416	24678010	CAPACITOR, ELECTROLYTIC CE04Q 200V 1.0UF M 3A
	C417	24214391	CAPACITOR, CERAMIC DISK CK45 B 500V 390PF K
	C419	24539474	CAPACITOR, MT PLA CAP M 50V 474J MUL
	C421	24794101	CAPACITOR, ELECTROLYTIC CE04G 16V 100UF M
	C431	24794101	CAPACITOR, ELECTROLYTIC CE04G 16V 100UF M
	C439	24829393	CAPACITOR, PLASTIC FILM CQ92 T 400V 39000PF J
	C439	24829433	CAPACITOR, PLASTIC FILM CQ92 T 400V 43000PF J
⚠	C440	24082592	CAPACITOR, PLASTIC FILM CF92 T 1800VH 1000PF H
	C441	24082917	CAPACITOR, PLASTIC FILM, 0.30MFD, 315V, J
⚠	C442	24082921	CAPACITOR, PLASTIC FILM CF92 T 315V 0.43UF J
	C442	24082924	CAPACITOR, MT PLA CAP T 315V 564J
⚠	C443	24082608	CAPACITOR, PLASTIC FILM, 1800VH 4700PF H
⚠	C443	24082609	CAPACITOR, PLASTIC FILM, 1800VH 5100PF H
⚠	C444	24082616	CAPACITOR, PLASTIC FILM CF92 T 1800VH 10000P
	C445	24828563	CAPACITOR, PLASTIC FILM CQ92 T 200V 56000PF J
	C446	24679100	CAPACITOR, ELECTROLYTIC CE04Q 250V 10UF M 3A
	C448	24640962	CAPACITOR, CHEMICON 04H 200V 330M

	Location No.	Part No.	Description
	C449	24666102	CAPACITOR, ELECTROLYTIC CE04Q 16V 1000UF M 3A
	C450	24829473	CAPACITOR, PLASTIC FILM CQ92 T 400V 47000PF J
	C453	24092344	CAPACITOR, CERAMIC DISC CK45R 2KV 820PF K
	C457	24591222	CAPACITOR, PLASTIC FILM CQ921 M 50V 2200PF J
	C461	24082923	CAPACITOR, PLASTIC FILM CF92 T 315V 0.51UF J
	C463	24212152	CAPACITOR, CERAMIC DISK CK45 B 50V 1500PF K
	C464	24640872	CAPACITOR, ELECTROLYTIC CE04R 100V 10UF M 3A
	C465	24212472	CAPACIT0R, CERAMIC DISK CK45 B 50V 4700PF K
⚠	C467	24820243	CAPACITOR, PLASTIC FILM CQ92 T 630V 24000PF
⚠	C467	24820563	CAPACITOR, PLASTIC FILM CQ92 T 630V 56000PF J
⚠	C469	24820243	CAPACITOR, PLASTIC FILM CQ92 T 630V 24000PF
	C471	24797479	CAPACITOR, ELECTROLYTIC CE04G 50V 4.7UF M
	C473	24797479	CAPACITOR, ELECTROLYTIC CE04G 50V 4.7UF M
	C474	24797479	CAPACITOR, ELECTROLYTIC CE04G 50V 4.7UF M
	C476	24829273	CAPACITOR, PLASTIC FILM CQ92 T 400V 27000PF J
	C480	24747220	CAPACITOR, ELECTROLYTIC CE04HS 50V 22UF M 7L 3A
	C481	24503049	CAPACITOR, MT PLA CAP 63V 0.47UF J
	C482	24797478	CAPACITOR, ELECTROLYTIC CE04G 50V 0.47UF M
	C499	24212102	CAPACITOR, CERAMIC DISK CK45 B 50V 1000PF K
	C501	24436102	CAPACITOR, CERAMIC DISC CC45SL 50V 1000PF J
	C504	24591222	CAPACITOR, PLASTIC FILM CQ921 M 50V 2200PF J
	C505	24353120	CAPACITOR, CERAMIC DISC CC45CH 50V 12PF J
	C510	24763101	CAPACITOR, ELECTROLYTIC CE04G 16V 100UF M
	C512	24206228	CAPACITOR, ELECTROLYTIC CE04WS 50V 0.22UF M 7L 3A
	C583	24762471	CAPACITORA, ELECTROLYTIC CE04G 10V 470UF M
	C612	24794470	CAPACITOR, ELECTORLYTIC CE04G 16V 47UF M
	C661	24212102	CAPACITOR, CERAMIC DISK CK45 B 50V 1000PF K
	C662	24212102	CAPACITOR, CERAMIC DISK CK45 B 50V 1000PF K
	C663	24666100	CAPACITOR, ELECTROLYTIC CE04Q 10V 10UF M 3A
	C671	24795470	CAPACITOR, ELECTROLYTIC CE04G 25V 47UF M
	C672	24795470	CAPACITOR, ELECTROLYTIC CE04G 25V 47UF M
	C673	24669229	CAPACITOR, ELECTROLYTIC CE04Q 50V 2.2UF M 3A
	C674	24669010	CAPACITOR, ELECTROLYTIC CE04Q 50V 1.0UF M 3A
	C674	24669229	CAPACITOR, ELECTROLYTIC CE04Q 50V 2.2UF M 3A
	C675	24669010	CAPACITOR, ELECTROLYTIC CE04Q 50V 1.0UF M 3A
	C675	24669229	CAPACITOR, ELECTROLYTIC CE04Q 50V 2.2UF M 3A
	C676	24503041	CAPACITOR, MT PLA CAP 63V 0.1UF J
	C677	24503041	CAPACITOR, MT PLA CAP 63V 0.1UF J
	C678	24669229	CAPACITOR, ELECTROLYTIC CE04Q 50V 2.2UF M 3A
	C679	24795470	CAPACITOR, ELECTROLYTIC CE04G 25V 47UF M
	C681	24667102	CAPACITOR, ELECTROLYTIC CE04Q 25V 1000UF M 3A
	C682	24668101	CAPACITOR, ELECTROLYTIC CE04Q 35V 100UF M 3A
	C682	24668471	CAPACITOR, ELECTROLYTIC CE04Q 35V 470UF M 3A
	C683	24667102	CAPACITOR, ELECTROLYTIC CE04Q 25V 1000UF M 3A
	C707	24794101	CAPACITOR, ELECTROLYTIC CE04G 16V 100UF M
	C713	24709100	CAPACITOR, ELECTROLYTIC CE04G 200V 10UF M
	C714	24436101	CAPACITOR, CERAMIC DISC CC45 SL 50V100PF J
	C715	24214472	CAPACITOR, CERAMIC DISK CK45 B 500V 4700PF K
	C716	24436101	CAPACITOR, CERAMIC DISC CC45 SL 50V100PF J

Location No.	Part No.	Description
C717	24214472	CAPACITOR, CERAMIC DISK CK45 B 500V 4700PF K
C718	24794470	CAPACITOR, ELECTORLYTIC CE04G 16V 47UF M
C719	24435560	CAPACITOR, PCERA CAP SL 500V 560J
C720	24709100	CAPACITOR, ELECTROLYTIC CE04G 200V 10UF M
C721	24794470	CAPACITOR, ELECTORLYTIC CE04G 16V 47UF M
C726	24212102	CAPACITOR, CERAMIC DISK CK45 B 50V 1000PF K
C801	24503002	CAPACITOR, MT PLA AC275V 0.22UF M
C802	24503001	CAPACITOR, PLASTIC FILM, AC275V 0.1UF M
C805	24092623	CAPACITOR, CERAMIC DISC CKS45F 250V 10000PFZ
C806	24092623	CAPACITOR, CERAMIC DISC CKS45F 250V 10000PFZ
C808	24667221	CAPACITOR, ELECTROLYTIC CE04Q 25V 220UF M 3A
C810	24073103	CAPACITOR, 200V 680UF RUBIKON CE692Q2D681M
C811	24092597	CAPACITOR, CERAMIC DISC CK45E AC250V 4700PF M
C811A	23960136	SILICONE, TSE3843-W, ADHESIVE
C812	24092597	CAPACITOR, CERAMIC DISC CK45E AC250V 4700PF M
C813	24092597	CAPACITOR, CERAMIC DISC CK45E AC250V 4700PF M
C815	24092597	CAPACITOR, CERAMIC DISC CK45E AC250V 4700PF M
C816	24092597	CAPACITOR, CERAMIC DISC CK45E AC250V 4700PF M
C817	24092339	CAPACITOR, CERAMIC DISC CK45R 2KV 330PF K
C818	24082402	CAPACITOR, PLASTIC FILM, 1250VH 2200PF H
C821	24214471	CAPACITOR, CERAMIC DISK CK45 B 500V 470PF K
C822	24503041	CAPACITOR, MT PLA CAP 63V 0.1UF J
C823	24212471	CAPACITOR, CERAMIC DISK CK45 B 50V 470PF K
C829	24591681	CAPACITOR, PLASTIC FILM CQ921 M 50V 680PF J
C832	24794470	CAPACITOR, ELECTORLYTIC CE04G 16V 47UF M
C840	24795221	CAPACITOR, ELECTROLYTIC CE04G 25V 220UF M
C842	24792101	CAPACITOR, ELECTROLYTIC CE04G 6.3V 100UF M
C843	24797479	CAPACITOR, ELECTROLYTIC CE04G 50V 4.7UF M
C850	24794470	CAPACITOR, ELECTORLYTIC CE04G 16V 47UF M
C884	24086049	CAPACITOR, ELECTROLYTIC CE692J 160V 330UF M 3D
C886	24214471	CAPACITOR, CERAMIC DISK CK45 B 500V 470PF K
C889	24796222	CAPACITOR, ELECTROLYTIC CE04G 35V 2200UF M
C891	24503041	CAPACITOR, MT PLA CAP 63V 0.1UF J
C891	24591223	CAPACITOR, PLASTIC FILM CQ921 M 50V 0.022MF J
C893	24092339	CAPACITOR, CERAMIC DISC CK45R 2KV 330PF K
C898	24539224	CAPACITOR, PLASTIC FILM, 50V 0.22 UF J
C902	24092352	CAPACITOR, CERAMIC DISC CK45R 2KV 3900PF K
C904	24436331	CAPACITOR, CERAMIC DISC CC45 SL 50V330PF J
C905	24436331	CAPACITOR, CERAMIC DISC CC45 SL 50V330PF J
C907	24436331	CAPACITOR, CERAMIC DISC CC45 SL 50V330PF J
C909	24679220	CAPACITOR, ELECTROLYTIC CE04Q 250V 22UF M 3A
C910	24797478	CAPACITOR, ELECTROLYTIC CE04G 50V 0.47UF M
C911	24203100	CAPASITOR, ELECTORLYTIC CE04WS 16V 10UF M 7L 3A
C912	24794471	CAPACITOR, ELECTROLYTIC CE04G 16V 470UF M
C913	24794100	CAPACITOR, ELECTROLYTIC CE04G 16V 10UF M
C914	24212103	CAPACITOR, CERAMIC DISK CK45 B 50V 10000PF K
C930	24214101	CAPACITOR, CERAMIC DISK CK45 B 500V 100PF K
C970	24794470	CAPACITOR, ELECTORLYTIC CE04G 16V 47UF M
C971	24794470	CAPACITOR, ELECTORLYTIC CE04G 16V 47UF M

Location No.	Part No.	Description
C972	24794470	CAPACITOR, ELECTORLYTIC CE04G 16V 47UF M
C3319	24591103	CAPACITOR, PLASTIC FILM CQ921 M 50V 0.01MF J
C3322	24617912	CAPACITOR, ELECTROLYTIC CE04CH 50V 2.2UF K 3A LI
C3323	24503049	CAPACITOR, MT PLA CAP 63V 0.47UF J
C3325	24591203	CAPACITOR, PLASTIC FILM CQ921 M 50V 0.020MF J
C3326	24212102	CAPACITOR, CERAMIC DISK CK45 B 50V 1000PF K
C3326	24503049	CAPACITOR, MT PLA CAP 63V 0.47UF J
C3327	24073041	CAPACITOR, ELECTROLYTIC CE04P 16V 470UF M 3A
C3360	24763471	CAPACITOR, ELECTROLYTIC CE04G 16V 470UF M
C3361	24503037	CAPACITOR, MT PLA CAP 63V 0.047UF J
C3440	24082395	CAPACITOR, PLASTIC FILM, 1250VH 1100PF H
C4462	23114528	TRANSISTOR, 2SC1740S
C4463	24567224	CAPACITOR, PLASTIC FILM CF92 M 50V R22UF J
CA13	24212101	CAPACITOR, CERAMIC DISK CK45 B 50V 100PF K
CA13	24436470	CAPACITOR, CERAMIC DISC CC45 SL 50V47PF J
CA28	24503041	CAPACITOR, MT PLA CAP 63V 0.1UF J
CA36	24212101	CAPACITOR, CERAMIC DISK CK45 B 50V 100PF K
CA37	24212101	CAPACITOR, CERAMIC DISK CK45 B 50V 100PF K
CA38	24212101	CAPACITOR, CERAMIC DISK CK45 B 50V 100PF K
CA42	24794100	CAPACITOR, ELECTROLYTIC CE04G 16V 10UF M
CA68	24794100	CAPACITOR, ELECTROLYTIC CE04G 16V 10UF M
CB01	24794470	CAPACITOR, ELECTORLYTIC CE04G 16V 47UF M
CB01	24797470	CAPACITOR, ELECTROLYTIC CE04G 50V 47UF M
CB41	24763221	CAPACITOR, ELECTROLYTIC, 16V 220UF M
CB48	24436101	CAPACITOR, CERAMIC DISC CC45 SL 50V100PF J
CD80	24794100	CAPACITOR, ELECTROLYTIC CE04G 16V 10UF M
CG02	24203220	CAPACITOR, ELECTROLYTIC CE04WS 16V 22UF M 7L 3A
CG03	24503041	CAPACITOR, MT PLA CAP 63V 0.1UF J
CG05	24797010	CAPACITOR, ELECTROLYTIC CE04G 50V 1.0UF M
CG06	24797479	CAPACITOR, ELECTROLYTIC CE04G 50V 4.7UF M
CG07	24206229	CAPACIT0R, ELECTROLYTIC CE04WS 50V 2.2UF M 7L 3A
CG08	24591473	CAPACITOR, PLASTIC FILM CQ921 M 50V 0.047MF J
CG09	24797478	CAPACITOR, ELECTROLYTIC CE04G 50V 0.47UF M
CG10	24503041	CAPACITOR, MT PLA CAP 63V 0.1UF J
CG12	24206108	CAPACITOR, ELECTROLYTIC CE04WS 50V 0.1UF M 7L 3A
CG13	24704335	CAPACITOR, TA SOLID ELEC.CS15H 16V 3.3UF M
CG14	24797010	CAPACITOR, ELECTROLYTIC CE04G 50V 1.0UF M
CG16	24704106	CAPACITOR, TA SOLID ELEC.CS15H 16V 10UF M
CG17	24797010	CAPACITOR, ELECTROLYTIC CE04G 50V 1.0UF M
CG18	24797010	CAPACITOR, ELECTROLYTIC CE04G 50V 1.0UF M
CG19	24797479	CAPACITOR, ELECTROLYTIC CE04G 50V 4.7UF M
CG20	24797010	CAPACITOR, ELECTROLYTIC CE04G 50V 1.0UF M
CG25	24797479	CAPACITOR, ELECTROLYTIC CE04G 50V 4.7UF M
CG26	24797479	CAPACITOR, ELECTROLYTIC CE04G 50V 4.7UF M
CG27	24591223	CAPACITOR, PLASTIC FILM CQ921 M 50V 0.022MF J
CG28	24797229	CAPACITOR, ELECTROLYTIC CE04G 50V 2.2UF M
CG29	24591102	CAPACITOR, PLASTIC FILM CQ921 M 50V 1000PF J
CG30	24206108	CAPACITOR, ELECTROLYTIC CE04WS 50V 0.1UF M 7L 3A
CG31	24797229	CAPACITOR, ELECTROLYTIC CE04G 50V 2.2UF M

Location No.	Part No.	Description
CG32	24591102	CAPACITOR, PLASTIC FILM CQ921 M 50V 1000PF J
CG33	24206108	CAPACITOR, ELECTROLYTIC CE04WS 50V 0.1UF M 7L 3A
CG37	24205479	CAPACITOR, ELECTROLYTIC CE04WS 35V 4.7UF M 7L 3A
CG37	24206229	CAPACIT0R, ELECTROLYTIC CE04WS 50V 2.2UF M 7L 3A
CG38	24205479	CAPACITOR, ELECTROLYTIC CE04WS 35V 4.7UF M 7L 3A
CG38	24206229	CAPACIT0R, ELECTROLYTIC CE04WS 50V 2.2UF M 7L 3A
CG42	24206010	CAPACITOR, ELECTROLYTIC CE04WS 50V 1.0UF M 7L 3A
CG44	24203100	CAPASITOR, ELECTORLYTIC CE04WS 16V 10UF M 7L 3A
CG46	24203101	CAPACITOR, ELECTROLYTIC CE04WS 16V 100UF M 7L 3A
CG60	24797220	CAPACITOR, ELECTROLYTIC CE04G 50V 22UF M
CG61	24797220	CAPACITOR, ELECTROLYTIC CE04G 50V 22UF M
CG62	24797229	CAPACITOR, ELECTROLYTIC CE04G 50V 2.2UF M
CG63	24797010	CAPACITOR, ELECTROLYTIC CE04G 50V 1.0UF M
CG66	24794470	CAPACITOR, ELECTORLYTIC CE04G 16V 47UF M
CG67	24085981	CAPACITOR, ELEC. NONPOLAR CE04J 16V 10UF M 11L NP
CG68	24794100	CAPACITOR, ELECTROLYTIC CE04G 16V 10UF M
CG69	24797479	CAPACITOR, ELECTROLYTIC CE04G 50V 4.7UF M
CG70	24794100	CAPACITOR, ELECTROLYTIC CE04G 16V 10UF M
CG70	24794220	CAPACITOR, ELECTROLYTIC CE04G 16V 22UF M
CG71	24794100	CAPACITOR, ELECTROLYTIC CE04G 16V 10UF M
CG72	24794221	CAPACITOR, ELECTROIYTIC CE04G 16V 220UF M
CM51	24503041	CAPACITOR, MT PLA CAP 63V 0.1UF J
CM58	24503041	CAPACITOR, MT PLA CAP 63V 0.1UF J
CR98	24436100	CAPACITOR, CERAMIC DISC CC45SL 50V SL 10PF C
CR99	24436100	CAPACITOR, CERAMIC DISC CC45SL 50V SL 10PF C
CS02	24797229	CAPACITOR, ELECTROLYTIC CE04G 50V 2.2UF M
CS04	24797229	CAPACITOR, ELECTROLYTIC CE04G 50V 2.2UF M
CS08	24797229	CAPACITOR, ELECTROLYTIC CE04G 50V 2.2UF M
CS10	24797229	CAPACITOR, ELECTROLYTIC CE04G 50V 2.2UF M
CS14	24797229	CAPACITOR, ELECTROLYTIC CE04G 50V 2.2UF M
CS16	24797229	CAPACITOR, ELECTROLYTIC CE04G 50V 2.2UF M
CS25	24797229	CAPACITOR, ELECTROLYTIC CE04G 50V 2.2UF M
CS26	24797229	CAPACITOR, ELECTROLYTIC CE04G 50V 2.2UF M
CS37	24205479	CAPACITOR, ELECTROLYTIC CE04WS 35V 4.7UF M 7L 3A
CS39	24205479	CAPACITOR, ELECTROLYTIC CE04WS 35V 4.7UF M 7L 3A
CS40	24797010	CAPACITOR, ELECTROLYTIC CE04G 50V 1.0UF M
CS42	24797010	CAPACITOR, ELECTROLYTIC CE04G 50V 1.0UF M
CS43	24436331	CAPACITOR, CERAMIC DISC CC45 SL 50V330PF J
CS44	24436331	CAPACITOR, CERAMIC DISC CC45 SL 50V330PF J
CS45	24436331	CAPACITOR, CERAMIC DISC CC45 SL 50V330PF J
CS46	24436331	CAPACITOR, CERAMIC DISC CC45 SL 50V330PF J
CS47	24436331	CAPACITOR, CERAMIC DISC CC45 SL 50V330PF J
CS48	24436331	CAPACITOR, CERAMIC DISC CC45 SL 50V330PF J
CS49	24436331	CAPACITOR, CERAMIC DISC CC45 SL 50V330PF J
CS50	24436331	CAPACITOR, CERAMIC DISC CC45 SL 50V330PF J
CS51	24212102	CAPACITOR, CERAMIC DISK CK45 B 50V 1000PF K
CS52	24212102	CAPACITOR, CERAMIC DISK CK45 B 50V 1000PF K
CS70	24794220	CAPACITOR, ELECTROLYTIC CE04G 16V 22UF M
CS71	24794220	CAPACITOR, ELECTROLYTIC CE04G 16V 22UF M

Location No.	Part No.	Description
CS115	24206010	CAPACITOR, ELECTROLYTIC CE04WS 50V 1.0UF M 7L 3A
CS116	24206010	CAPACITOR, ELECTROLYTIC CE04WS 50V 1.0UF M 7L 3A
CS118	24794470	CAPACITOR, ELECTORLYTIC CE04G 16V 47UF M
CS120	24206010	CAPACITOR, ELECTROLYTIC CE04WS 50V 1.0UF M 7L 3A
CS625	24797479	CAPACITOR, ELECTROLYTIC CE04G 50V 4.7UF M
CS626	24797479	CAPACITOR, ELECTROLYTIC CE04G 50V 4.7UF M
CS627	24797479	CAPACITOR, ELECTROLYTIC CE04G 50V 4.7UF M
CS628	24797479	CAPACITOR, ELECTROLYTIC CE04G 50V 4.7UF M
CS630	24794101	CAPACITOR, ELECTROLYTIC CE04G 16V 100UF M
CV03	24206108	CAPACITOR, ELECTROLYTIC CE04WS 50V 0.1UF M 7L 3A
CV09	24503041	CAPACITOR, MT PLA CAP 63V 0.1UF J
CV13	24206108	CAPACITOR, ELECTROLYTIC CE04WS 50V 0.1UF M 7L 3A
CV24	24591473	CAPACITOR, PLASTIC FILM CQ921 M 50V 0.047MF J
CV25	24794220	CAPACITOR, ELECTROLYTIC CE04G 16V 22UF M
CV27	24206108	CAPACITOR, ELECTROLYTIC CE04WS 50V 0.1UF M 7L 3A
CV31	24503041	CAPACITOR, MT PLA CAP 63V 0.1UF J
CV38	24763471	CAPACITOR, ELECTROLYTIC CE04G 16V 470UF M
CV41	24591223	CAPACITOR, PLASTIC FILM CQ921 M 50V 0.022MF J
CV60	24763471	CAPACITOR, ELECTROLYTIC CE04G 16V 470UF M
CV61	24762471	CAPACITORA, ELECTROLYTIC CE04G 10V 470UF M
CV120	24794100	CAPACITOR, ELECTROLYTIC CE04G 16V 10UF M
CZ03	24092743	CAPACITOR, CERAMIC CHIP CK73F 10V 470NF Z
CZ05	24109103	CAPACITOR, CERAMIC CHIP CK73B 50V 10000PF K
CZ07	24092730	CAPACITOR, CERAMIC CHIPü@CK73B
CZ09	24105220	CAPACITOR, CERAMIC CHIP CC73CH 50V 22PF J
CZ10	24105100	CAPACITOR, CERAMIC CHIP CC73CH 50V 10PF D
CZ11	24105220	CAPACITOR, CERAMIC CHIP CC73CH 50V 22PF J
CZ12	24109103	CAPACITOR, CERAMIC CHIP CK73B 50V 10000PF K
CZ13	24109103	CAPACITOR, CERAMIC CHIP CK73B 50V 10000PF K
CZ14	24203100	CAPASITOR, ELECTORLYTIC CE04WS 16V 10UF M 7L 3A
CZ17	24109103	CAPACITOR, CERAMIC CHIP CK73B 50V 10000PF K
CZ19	24105181	CAPACITOR, CERAMIC CHIP CC73CH 50V 180PF J
CZ20	24109103	CAPACITOR, CERAMIC CHIP CK73B 50V 10000PF K
CZ21	24109122	CAPACITOR, CERAMIC CHIP CC73B 50V 1200PF K
CZ22	24203100	CAPASITOR, ELECTORLYTIC CE04WS 16V 10UF M 7L 3A
CZ23	24109103	CAPACITOR, CERAMIC CHIP CK73B 50V 10000PF K
CZ24	24109103	CAPACITOR, CERAMIC CHIP CK73B 50V 10000PF K
CZ25	24203100	CAPASITOR, ELECTORLYTIC CE04WS 16V 10UF M 7L 3A
CZ26	24109103	CAPACITOR, CERAMIC CHIP CK73B 50V 10000PF K
CZ28	24109103	CAPACITOR, CERAMIC CHIP CK73B 50V 10000PF K
CZ29	24109103	CAPACITOR, CERAMIC CHIP CK73B 50V 10000PF K
CZ30	24203100	CAPASITOR, ELECTORLYTIC CE04WS 16V 10UF M 7L 3A
CZ31	24092730	CAPACITOR, CERAMIC CHIPü@CK73B
CZ32	24105150	CAPACITOR, CERAMIC CHIP CC73CH 50V 15PF J
CZ33	24105390	CAPACITOR, CERAMIC CHIP CC73CH 50V 39PF J
CZ34	24105150	CAPACITOR, CERAMIC CHIP CC73CH 50V 15PF J
CZ35	24105390	CAPACITOR, CERAMIC CHIP CC73CH 50V 39PF J
CZ37	24203100	CAPASITOR, ELECTORLYTIC CE04WS 16V 10UF M 7L 3A
CZ38	24203100	CAPASITOR, ELECTORLYTIC CE04WS 16V 10UF M 7L 3A

Location No.	Part No.	Description
CZ41	24105470	CAPACITOR, CERAMIC CHIP CC73CH 50V 47PF J
CZ42	24105470	CAPACITOR, CERAMIC CHIP CC73CH 50V 47PF J
CZ45	24105100	CAPACITOR, CERAMIC CHIP CC73CH 50V 10PF D
		RESISTORS
R101	24382223	RESISTOR, OXIDE FILM 1W 22K J
R201	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
R202	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
R203	24366474	RESISTOR, CARBON FILM, 1/6W 470K OHM J
R205	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
R206	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
R207	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
R208	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
R209	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
R216	24366223	RESISTOR, CARBON FILM, 1/6W 22K OHM J
R223	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
R228	24366473	RESISTOR, CARBON FILM, 1/6W 47K OHM J
R238	24366473	RESISTOR, CARBON FILM, 1/6W 47K OHM J
R239	24366274	RESISTOR, CARBON,FILM G SB 1/6W 270K J
R240	24366562	RESISTOR, CARBON FILM SB 1/6W 5.6K J
R241	24366682	RESISTOR, CARBON,FILM G SB 1/6W 6.8K J
R245	24366104	RESISTOR, CARBON FILM SB 1/6W 100K J
R261	24366472	RESISTOR, CARBON FILM, 1/6W 4.7K OHM J
R262	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
R263	24366472	RESISTOR, CARBON FILM, 1/6W 4.7K OHM J
R264	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
R265	24366472	RESISTOR, CARBON FILM, 1/6W 4.7K OHM J
R266	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
R271	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
R272	24366222	RESISTOR, CARBON FILM, 1/6W 2.2K OHM J
R275	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
R302	24366222	RESISTOR, CARBON FILM, 1/6W 2.2K OHM J
R303	24321109	RESISTOR, OXIDE METAL FILM, 1/2W 1 OHM J
R305	24322688	RESISTOR, METAL FILM 1W R68 J
R305	24322828	RESISTOR, OXIDE METAL FILM, 1W 0.82 OHM J
R306	24366223	RESISTOR, CARBON FILM, 1/6W 22K OHM J
R306	24366333	RESISTOR, CARBON FILM, 1/6W 33K OHM J
R309	24366154	RESISTOR, CARBON FILM, 1/6W 150K OHM J
R309	24366753	RESISTOR, CARBON RES G 1/6W 753J
R310	24366153	RESISTOR, CARBON FILM, 1/6W 15K OHM J
R311	24366392	RESISTOR, CARBON FILM SB 1/6W 3.9K J
R312	24366153	RESISTOR, CARBON FILM, 1/6W 15K OHM J
R313	24366153	RESISTOR, CARBON FILM, 1/6W 15K OHM J
R314	24366105	RESISTOR, CARBON,FILM G SB 1/6W 1M J
R315	24366824	RESISTOR, CARBON FILM, 1/6W 820K OHM J
R318	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
R319	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
R320	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J

Location No.	Part No.	Description
R321	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
R322	24366394	RESISTOR, CARBON FILM, 1/6W 390K OHM J
R323	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
R324	24000638	RESISTOR, METAL FILM 1/4W 16K F
R324	24366473	RESISTOR, CARBON FILM, 1/6W 47K OHM J
R326	24366104	RESISTOR, CARBON FILM SB 1/6W 100K J
R326	24366474	RESISTOR, CARBON FILM, 1/6W 470K OHM J
R327	24339479	RESISTOR, METAL FILM, 2W 4.7 OHM J
R328	24366684	RESISTOR, CARBON FILM, 1/6W 680K OHM J
R329	24366153	RESISTOR, CARBON FILM, 1/6W 15K OHM J
R330	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
R331	24366134	RESISTOR, CARBON FILM, 1/6W 130K OHM J
R333	24000244	RESISTOR, METAL FILM 1/4W 30K F
R333	24000362	RESISTOR, METAL FILM 1/4W 1.5K F
R335	24000632	RESISTOR, METAL FILM 1/4W 9.1K F
R335	24366393	RESISTOR, CARBON FILM, 1/6W 39K OHM J
R336	24383271	RESISTOR, METAL FILM, 2W 270 OHM J
R337	24000243	RESISTOR, METAL FILM 1/4W 24K F
R337	24000360	RESISTOR, METAL FILM 1/4W 1.2K F
R353	24366621	RESISTOR, CARBON,FILM G SB 1/6W 620. J
R360	24366104	RESISTOR, CARBON FILM SB 1/6W 100K J
R361	24366473	RESISTOR, CARBON FILM, 1/6W 47K OHM J
R362	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
R362	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
R363	24366105	RESISTOR, CARBON,FILM G SB 1/6W 1M J
R364	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
R365	24366681	RESISTOR, CARBON FILM, 1/6W 680 OHM J
R366	24366431	RESISTOR, CARBON,FILM G SB 1/6W 430. J
R367	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
R368	24545479	FUSE RES RN A 1/4W 4R7J
R369	24366391	RESISTOR, CARBON FILM, 1/6W 390 OHM J
R370	24321109	RESISTOR, OXIDE METAL FILM, 1/2W 1 OHM J
R371	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
R372	24366392	RESISTOR, CARBON FILM SB 1/6W 3.9K J
R373	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
R374	24366163	RESISTOR, CARBON FILM SB 1/6W 16K J
R379	24382103	RESISTOR, OXIDE FILM 1W 10K J
R389	24366472	RESISTOR, CARBON FILM, 1/6W 4.7K OHM J
R389	24366472	RESISTOR, CARBON FILM, 1/6W 4.7K OHM J
R392	24552102	RESISTOR, OXIDE METAL FILM, 1/2W 1K OHM J
R394	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
R396	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
R397	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
R398	24366184	RESISTOR, CABON FILM, 1/6W 18OK OHM J
R399	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
R400	24946561	RESISTOR, CARBON COMPOSITION GF 1/2W 560 K
R401	24366391	RESISTOR, CARBON FILM, 1/6W 390 OHM J
R403	24366622	RESISTOR, CARBON,FILM G SB 1/6W 6.2K J
R405	24382682	RESISTOR, OXIDE FILM 1W 6.8K J

	Location No.	Part No.	Description
	R406	24366104	RESISTOR, CARBON FILM SB 1/6W 100K J
	R407	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
	R407	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
	R408	24366472	RESISTOR, CARBON FILM, 1/6W 4.7K OHM J
	R409	24376153	RESISTOR, CARBON RES B 1/2W 153J
	R410	24366271	RESISTOR, CARBON FILM, 1/6W 270 OHM J
	R411	24366561	RESISTOR, CARBON FILM, 1/6W 560 OHM J
	R415	24553272	RESISTOR, OXIDE METAL FILM, 1W 2.7K OHM J
	R416	24510432	RESISTOR, CERAMIC COVERED G 5W 4.3K J
	R416	24510562	RESISTOR, CERAMIC COVERED, 5W 5.6K OHM J
	R418	24383181	RESISTOR, OXIDE RES B 2W 181J
	R424	24546279	RESISTOR, FUSIBLE, 1/2W 2.7 OHM J
	R425	24366561	RESISTOR, CARBON FILM, 1/6W 560 OHM J
	R425	24366561	RESISTOR, CARBON FILM, 1/6W 560 OHM J
	R430	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
	R431	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
	R432	24366202	RESISTOR, CARBON FILM, 1/6W 2K OHM J
	R441	24532102	RESISTOR, FUSIBLE, 1W 1K OHM J
	R443	24382513	RESISTOR, OXIDE FILM 1W 51K J
	R445	24310229	RESISTOR, METAL FILM 1/2W 2R2 J
	R448	24338228	RESISTOR, METAL FILM 1W R22 J
	R448	24338478	RESISTOR, METAL FILM 1W R47 J
	R456	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
	R457	24366104	RESISTOR, CARBON FILM SB 1/6W 100K J
	R462	24366561	RESISTOR, CARBON FILM, 1/6W 560 OHM J
	R463	24322479	RESISTOR, METAL FILM 1W 4R7 J
	R472	24382270	RESISTOR, OXIDE FILM 1W 27 J
⚠	R475	24366391	RESISTOR, CARBON FILM, 1/6W 390 OHM J
	R476	24366823	RESISTOR, CARBON FILM, 1/6W 82K OHM J
	R477	24366273	RESISTOR, CARBON FILM, 1/6W 27K OHM J
⚠	R478	24327133	RESISTOR, METAL RES K 1/4W 133F
	R480	24366223	RESISTOR, CARBON FILM, 1/6W 22K OHM J
	R481	24366333	RESISTOR, CARBON FILM, 1/6W 33K OHM J
⚠	R482	24327472	RESISTOR, METAL FILM 1/4W 4R7K F
	R483	24366223	RESISTOR, CARBON FILM, 1/6W 22K OHM J
	R484	24366154	RESISTOR, CARBON FILM, 1/6W 150K OHM J
	R485	24338568	RESISTOR, METAL FILM, 1W 0.56 OHM J
	R486	24552820	RESISTOR, OXIDE METAL FILM, 1/2W 82 OHM J
	R487	24552301	RESISTOR, 0XIDE RES B 1/2W 301J
	R488	24327183	RESISTER. METAL FILM. 1/4W 18KOHMF
	R489	24327183	RESISTER. METAL FILM. 1/4W 18KOHMF
	R490	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
	R490	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
	R491	24366563	RESISTOR, CARBON FILM, 1/6W 56K OHM J
	R493	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
	R494	24366471	RES1STOR, CARBON F1LM, 1/6W 470 OHM J
	R495	24366560	RESISTOR, CARBON FILM, 1/6W 56 OHM J
	R498	24510279	RESISTOR, CERAMIC COVERED G 5W 2.7 J
	R501	24366333	RESISTOR, CARBON FILM, 1/6W 33K OHM J

Location No.	Part No.	Description
R502	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
R503	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
R508	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
R509	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
R510	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
R511	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
R612	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
R612	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
R613	24366222	RESISTOR, CARBON FILM, 1/6W 2.2K OHM J
R614	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
R614	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
R661	24366182	RESISTOR, CARBON FILM, 1/6W 1.8K OHM J
R661	24366332	RES1STOR, CARBON F1LM, 1/6 3.3K OHM J
R662	24366182	RESISTOR, CARBON FILM, 1/6W 1.8K OHM J
R662	24366332	RES1STOR, CARBON F1LM, 1/6 3.3K OHM J
R663	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
R663	24366152	RESISTOR, CARBON FILM, 1/6W 1.5K OHM J
R664	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
R664	24366152	RESISTOR, CARBON FILM, 1/6W 1.5K OHM J
R667	24366223	RESISTOR, CARBON FILM, 1/6W 22K OHM J
R668	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
R669	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
R674	24366153	RESISTOR, CARBON FILM, 1/6W 15K OHM J
R674	24366332	RES1STOR, CARBON F1LM, 1/6 3.3K OHM J
R676	24366229	RESISTOR, CARBON FILM, 1/6W 2.2 OHM J
R676	24366229	RESISTOR, CARBON FILM, 1/6W 2.2 OHM J
R677	24366229	RESISTOR, CARBON FILM, 1/6W 2.2 OHM J
R678	24366153	RESISTOR, CARBON FILM, 1/6W 15K OHM J
R678	24366332	RES1STOR, CARBON F1LM, 1/6 3.3K OHM J
R702	24366681	RESISTOR, CARBON FILM, 1/6W 680 OHM J
R709	24366563	RESISTOR, CARBON FILM, 1/6W 56K OHM J
R713	24366393	RESISTOR, CARBON FILM, 1/6W 39K OHM J
R714	24552121	RESISTOR, 0XIDE RES B 1/2W 121J
R715	24366273	RESISTOR, CARBON FILM, 1/6W 27K OHM J
R716	24366333	RESISTOR, CARBON FILM, 1/6W 33K OHM J
R717	24366333	RESISTOR, CARBON FILM, 1/6W 33K OHM J
R718	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
R719	24366392	RESISTOR, CARBON FILM SB 1/6W 3.9K J
R720	24366392	RESISTOR, CARBON FILM SB 1/6W 3.9K J
R722	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
R723	24366471	RES1STOR, CARBON F1LM, 1/6W 470 OHM J
R724	24366820	RESISTOR, CARBON,FILM, 1/6W 82 OHM J
R725	24366182	RESISTOR, CARBON FILM, 1/6W 1.8K OHM J
R730	24552100	RESISTOR, OXIDE METAL FILM, 1/2W 10 OHM J
R731	24552331	RESISTER, OXIDE METAL FILM, 1/2W 330 OHM J
R732	24366820	RESISTOR, CARBON,FILM, 1/6W 82 OHM J
R733	24366683	RESISTOR, CARBON FILM, 1/6W 68K OHM J
R734	24366820	RESISTOR, CARBON,FILM, 1/6W 82 OHM J
R735	24366683	RESISTOR, CARBON FILM, 1/6W 68K OHM J

Location No.	Part No.	Description
R736	24366620	RESISTOR, CARBON FILM, 1/6W 62 OHM J
R737	24366152	RESISTOR, CARBON FILM, 1/6W 1.5K OHM J
R738	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
R739	24366152	RESISTOR, CARBON FILM, 1/6W 1.5K OHM J
R740	24366620	RESISTOR, CARBON FILM, 1/6W 62 OHM J
R741	24366279	RESISTER, CARBON FILM, 1/6W 2.7 OHM J
R742	24366279	RESISTER, CARBON FILM, 1/6W 2.7 OHM J
R743	24554221	RESISTOR, OXIDE METAL FILM, 2W 220 OHM J
R744	24366122	RESISTOR, CARBON FILM SB 1/6W 1.2K J
R745	24366122	RESISTOR, CARBON FILM SB 1/6W 1.2K J
R808	24019477	THERMISTOR, PTC THERMISTOR AC140V 1R5 M
R810	24569828	RESISTOR, CERAMIC COVERED G 10W 0.82 K
R814	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
R815	24552472	RESISTOR, OXIDE METAL FILM, 1/2W 4.7K OHM J
R818	24510150	RESISTOR, CERAMIC COVERED G 5W 15 J
R820	24004942	RESISTOR, METAL FILM 1W R10 J
R821	24552101	RESISTOR, OXIDE METAL FILM, 1/2W 100 OHM J
R823	24366122	RESISTOR, CARBON FILM SB 1/6W 1.2K J
R823	24366152	RESISTOR, CARBON FILM, 1/6W 1.5K OHM J
R829	24004943	RESISTOR, METAL FILM 1W R12 J
R830	24548569	RESISTOR, FUSIBLE 2W 5R6 J
R831	24366561	RESISTOR, CARBON FILM, 1/6W 560 OHM J
R835	24552471	RESISTOR, OXIDE METAL FILM, 1/2W 470 OHM J
R850	24322759	RESISTOR, METAL FILM 1W 7R5 J
R851	24366561	RESISTOR, CARBON FILM, 1/6W 560 OHM J
R861	24553153	RESISTOR, OXIDE METAL FILM, 1W 15K OHM J
R883	24552102	RESISTOR, OXIDE METAL FILM, 1/2W 1K OHM J
R884	24366471	RES1STOR, CARBON F1LM, 1/6W 470 OHM J
R884	24366471	RES1STOR, CARBON F1LM, 1/6W 470 OHM J
R888	24321228	RESISTOR, METAL FILM 1/2W R22 J
R891	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
R891	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
R898	24002000	RESISTOR, CARBON COMPOSITION GE 1/2W 3R9M K
R901	24376561	RESISTOR, CARBON FILM SB1/2W 560. J
R902	24376561	RESISTOR, CARBON FILM SB1/2W 560. J
R903	24376561	RESISTOR, CARBON FILM SB1/2W 560. J
R904	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
R905	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
R912	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
R914	24366561	RESISTOR, CARBON FILM, 1/6W 560 OHM J
R915	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
R916	24366680	RESISTOR, CARBON FILM, 1/6W 68 OHM J
R917	24366471	RES1STOR, CARBON F1LM, 1/6W 470 OHM J
R918	24366820	RESISTOR, CARBON,FILM, 1/6W 82 OHM J
R919	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
R920	24000568	RESISTOR, FUSIBLE, 1W 4.7 OHM J
R921	24366561	RESISTOR, CARBON FILM, 1/6W 560 OHM J
R922	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
R923	24366391	RESISTOR, CARBON FILM, 1/6W 390 OHM J

Location No.	Part No.	Description
R924	24366820	RESISTOR, CARBON,FILM, 1/6W 82 OHM J
R925	24366471	RES1STOR, CARBON F1LM, 1/6W 470 OHM J
R926	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
R928	24366561	RESISTOR, CARBON FILM, 1/6W 560 OHM J
R929	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
R930	24366820	RESISTOR, CARBON,FILM, 1/6W 82 OHM J
R932	24366272	RESISTOR, CARBON FILM, 1/6W 2.7K OHM J
R933	24366750	RESISTOR, CARBON FILM, 1/6W 75 OHM J
R934	24366391	RESISTOR, CARBON FILM, 1/6W 390 OHM J
R935	24366821	RESISTOR, CARBON FILM, 1/6W 820 OHM J
R936	24366750	RESISTOR, CARBON FILM, 1/6W 75 OHM J
R937	24366471	RES1STOR, CARBON F1LM, 1/6W 470 OHM J
R939	24366680	RESISTOR, CARBON FILM, 1/6W 68 OHM J
R940	24366821	RESISTOR, CARBON FILM, 1/6W 820 OHM J
R942	24366392	RESISTOR, CARBON FILM SB 1/6W 3.9K J
R943	24366392	RESISTOR, CARBON FILM SB 1/6W 3.9K J
R944	24366392	RESISTOR, CARBON FILM SB 1/6W 3.9K J
R945	24366680	RESISTOR, CARBON FILM, 1/6W 68 OHM J
R946	24366680	RESISTOR, CARBON FILM, 1/6W 68 OHM J
R947	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
R948	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
R949	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
R950	24366302	RESISTOR, CARBON FILM SB 1/6W 3K J
R951	24366682	RESISTOR, CARBON,FILM G SB 1/6W 6.8K J
R952	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
R955	24366122	RESISTOR, CARBON FILM SB 1/6W 1.2K J
R957	24366822	RESISTOR, CARBON FILM, 1/6W 8.2K OHM J
R960	24383153	RESISTOR, OXIDE METAL FILM, 2W 15K OHM J
R961	24383153	RESISTOR, OXIDE METAL FILM, 2W 15K OHM J
R962	24383153	RESISTOR, OXIDE METAL FILM, 2W 15K OHM J
R963	24383153	RESISTOR, OXIDE METAL FILM, 2W 15K OHM J
R964	24383153	RESISTOR, OXIDE METAL FILM, 2W 15K OHM J
R965	24383153	RESISTOR, OXIDE METAL FILM, 2W 15K OHM J
R973	24366472	RESISTOR, CARBON FILM, 1/6W 4.7K OHM J
R976	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
R977	24366122	RESISTOR, CARBON FILM SB 1/6W 1.2K J
R978	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
R979	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
R980	24366471	RES1STOR, CARBON F1LM, 1/6W 470 OHM J
R981	24366821	RESISTOR, CARBON FILM, 1/6W 820 OHM J
R982	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
R983	24366222	RESISTOR, CARBON FILM, 1/6W 2.2K OHM J
R984	24367152	RESISTOR, CARBON RES G 1/6W 152G
R985	24367471	RESISTOR, CARBON,FILM G SB 1/6W 470. G
R986	24367681	RESISTOR, CARBON RES G 1/6W 681G
R987	24367681	RESISTOR, CARBON RES G 1/6W 681G
R988	24367472	CARBON RES G 1/6W 472G
R989	24367332	RESISTOR, CARBON RES G 1/6W 332G
R990	24366222	RESISTOR, CARBON FILM, 1/6W 2.2K OHM J

Location No.	Part No.	Description
R991	24367681	RESISTOR, CARBON RES G 1/6W 681G
R992	24366150	RESISTOR, CARBON FILM, 1/6W 15 OHM J
R993	24366471	RES1STOR, CARBON F1LM, 1/6W 470 OHM J
R994	24366392	RESISTOR, CARBON FILM SB 1/6W 3.9K J
R997	24366272	RESISTOR, CARBON FILM, 1/6W 2.7K OHM J
R998	24366472	RESISTOR, CARBON FILM, 1/6W 4.7K OHM J
R999	24366472	RESISTOR, CARBON FILM, 1/6W 4.7K OHM J
R3315	24366472	RESISTOR, CARBON FILM, 1/6W 4.7K OHM J
R3317	24366472	RESISTOR, CARBON FILM, 1/6W 4.7K OHM J
R3323	24366274	RESISTOR, CARBON,FILM G SB 1/6W 270K J
R3324	24366334	RESISTOR, CARBON FILM, 1/6W 330K OHM J
R3328	24366202	RESISTOR, CARBON FILM, 1/6W 2K OHM J
R3332	24366183	RESISTOR, CARBON FILM SB 1/6W 18K J
R3332	24366183	RESISTOR, CARBON FILM SB 1/6W 18K J
R3361	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
R3363	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
R3364	24366332	RES1STOR, CARBON F1LM, 1/6 3.3K OHM J
R3368	24366333	RESISTOR, CARBON FILM, 1/6W 33K OHM J
R3440	24338129	RESISTOR, METAL FILM 1W 1R2 J
R3442	24005016	RESISTOR, METAL GLAZE 1/2W 180K J
R3443	24005016	RESISTOR, METAL GLAZE 1/2W 180K J
R3444	24005016	RESISTOR, METAL GLAZE 1/2W 180K J
R3445	24005016	RESISTOR, METAL GLAZE 1/2W 180K J
R4310	24366183	RESISTOR, CARBON FILM SB 1/6W 18K J
R4311	24366563	RESISTOR, CARBON FILM, 1/6W 56K OHM J
R4385	24366822	RESISTOR, CARBON FILM, 1/6W 8.2K OHM J
R4386	24366331	RESISTOR, CARBON FILM, 1/6W 330 OHM J
R4460	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
R4461	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
R4462	24366133	RESISTOR, CARBON,FILM G SB 1/6W 13K J
R4463	24366682	RESISTOR, CARBON,FILM G SB 1/6W 6.8K J
R4465	24366223	RESISTOR, CARBON FILM, 1/6W 22K OHM J
R4466	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
R4466	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
R4466	24366223	RESISTOR, CARBON FILM, 1/6W 22K OHM J
R4467	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
R4467	24366223	RESISTOR, CARBON FILM, 1/6W 22K OHM J
R4468	24366562	RESISTOR, CARBON FILM SB 1/6W 5.6K J
R4468	24366472	RESISTOR, CARBON FILM, 1/6W 4.7K OHM J
R4469	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
R4470	24366393	RESISTOR, CARBON FILM, 1/6W 39K OHM J
R4470	24366393	RESISTOR, CARBON FILM, 1/6W 39K OHM J
R4760	24366133	RESISTOR, CARBON,FILM G SB 1/6W 13K J
R4761	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
R4761	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
R4762	24366104	RESISTOR, CARBON FILM SB 1/6W 100K J
R4762	24366333	RESISTOR, CARBON FILM, 1/6W 33K OHM J
R4763	24366472	RESISTOR, CARBON FILM, 1/6W 4.7K OHM J
R4763	24552272	RESISTOR, OXIDE METAL FILM, 1/2W 2.7K OHM J

Location No.	Part No.	Description
R4764	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
R4764	24366104	RESISTOR, CARBON FILM SB 1/6W 100K J
R4765	24366221	RESISTOR, CARBON FILM, 1/6W 220 OHM J
R4766	24366202	RESISTOR, CARBON FILM, 1/6W 2K OHM J
R4767	24003984	RESISTOR, METAL RES S 1/4W 102J
R4768	24366622	RESISTOR, CARBON,FILM G SB 1/6W 6.2K J
R4769	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
RA03	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
RA04	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
RA05	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
RA06	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
RA07	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
RA08	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
RA09	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
RA13	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
RA14	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
RA15	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
RA16	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
RA17	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
RA18	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
RA20	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
RA20	24366221	RESISTOR, CARBON FILM, 1/6W 220 OHM J
RA21	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
RA22	24366331	RESISTOR, CARBON FILM, 1/6W 330 OHM J
RA23	24366331	RESISTOR, CARBON FILM, 1/6W 330 OHM J
RA24	24366331	RESISTOR, CARBON FILM, 1/6W 330 OHM J
RA25	24366331	RESISTOR, CARBON FILM, 1/6W 330 OHM J
RA26	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
RA27	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
RA33	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
RA34	24366471	RES1STOR, CARBON F1LM, 1/6W 470 OHM J
RA35	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
RA36	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
RA37	24366331	RESISTOR, CARBON FILM, 1/6W 330 OHM J
RA38	24366331	RESISTOR, CARBON FILM, 1/6W 330 OHM J
RA40	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
RA41	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
RA61	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
RA62	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
RA67	24366472	RESISTOR, CARBON FILM, 1/6W 4.7K OHM J
RA68	24366472	RESISTOR, CARBON FILM, 1/6W 4.7K OHM J
RA71	24366683	RESISTOR, CARBON FILM, 1/6W 68K OHM J
RA71	24366683	RESISTOR, CARBON FILM, 1/6W 68K OHM J
RA72	24366223	RESISTOR, CARBON FILM, 1/6W 22K OHM J
RA72	24366223	RESISTOR, CARBON FILM, 1/6W 22K OHM J
RA73	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
RA73	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
RA74	24366333	RESISTOR, CARBON FILM, 1/6W 33K OHM J
RA76	24366822	RESISTOR, CARBON FILM, 1/6W 8.2K OHM J

Location No.	Part No.	Description
RA77	24366153	RESISTOR, CARBON FILM, 1/6W 15K OHM J
RA78	24366273	RESISTOR, CARBON FILM, 1/6W 27K OHM J
RA99	24366223	RESISTOR, CARBON FILM, 1/6W 22K OHM J
RA201	24366472	RESISTOR, CARBON FILM, 1/6W 4.7K OHM J
RB01	24366271	RESISTOR, CARBON FILM, 1/6W 270 OHM J
RB03	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
RB03	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
RB09	24366470	RESISTOR, CARBON FILM, 1/6W 47 OHM J
RB11	24366271	RESISTOR, CARBON FILM, 1/6W 270 OHM J
RB11	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
RB12	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
RB13	24366470	RESISTOR, CARBON FILM, 1/6W 47 OHM J
RB24	24366472	RESISTOR, CARBON FILM, 1/6W 4.7K OHM J
RB25	24366472	RESISTOR, CARBON FILM, 1/6W 4.7K OHM J
RB30	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
RB43	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
RB44	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
RB45	24366181	RESISTOR, CARBON FILM, 1/6W 180 OHM J
RB46	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
RB46	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
RB47	24366332	RES1STOR, CARBON F1LM, 1/6 3.3K OHM J
RB48	24366473	RESISTOR, CARBON FILM, 1/6W 47K OHM J
RB49	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
RB49	24366332	RES1STOR, CARBON F1LM, 1/6 3.3K OHM J
RD80	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
RD81	24366152	RESISTOR, CARBON FILM, 1/6W 1.5K OHM J
RD82	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
RD83	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
RD85	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
RG02	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
RG03	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
RG05	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
RG08	24366394	RESISTOR, CARBON FILM, 1/6W 390K OHM J
RG09	24366473	RESISTOR, CARBON FILM, 1/6W 47K OHM J
RG14	24366332	RES1STOR, CARBON F1LM, 1/6 3.3K OHM J
RG15	24327153	RESISTOR, METAL RES K 1/4W 153F
RG16	24366162	RESISTOR, CARBON FILM SB 1/6W 1.6K J
RG17	24366472	RESISTOR, CARBON FILM, 1/6W 4.7K OHM J
RG22	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
RG22	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
RG23	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
RG23	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
RG41	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
RG43	24366472	RESISTOR, CARBON FILM, 1/6W 4.7K OHM J
RG44	24366222	RESISTOR, CARBON FILM, 1/6W 2.2K OHM J
RG60	24366182	RESISTOR, CARBON FILM, 1/6W 1.8K OHM J
RG61	24366182	RESISTOR, CARBON FILM, 1/6W 1.8K OHM J
RG62	24366473	RESISTOR, CARBON FILM, 1/6W 47K OHM J
RG63	24366821	RESISTOR, CARBON FILM, 1/6W 820 OHM J

Location No.	Part No.	Description
RG64	24366222	RESISTOR, CARBON FILM, 1/6W 2.2K OHM J
RG66	24366562	RESISTOR, CARBON FILM SB 1/6W 5.6K J
RG67	24366822	RESISTOR, CARBON FILM, 1/6W 8.2K OHM J
RG68	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
RG68	24366152	RESISTOR, CARBON FILM, 1/6W 1.5K OHM J
RG69	24366564	RESISTOR, CARBON FILM, 1/6W 560K OHM J
RG70	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
RG71	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
RG71	24366473	RESISTOR, CARBON FILM, 1/6W 47K OHM J
RG72	24366222	RESISTOR, CARBON FILM, 1/6W 2.2K OHM J
RG80	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
RJ01	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
RJ02	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
RJ02	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
RJ04	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
RJ05	24323479	RESISTOR, METAL FILM 2W 4R7 J
RJ06	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
RR02	24366472	RESISTOR, CARBON FILM, 1/6W 4.7K OHM J
RR04	24366472	RESISTOR, CARBON FILM, 1/6W 4.7K OHM J
RR06	24366472	RESISTOR, CARBON FILM, 1/6W 4.7K OHM J
RR07	24366681	RESISTOR, CARBON FILM, 1/6W 680 OHM J
RR08	24366682	RESISTOR, CARBON,FILM G SB 1/6W 6.8K J
RR93	24366472	RESISTOR, CARBON FILM, 1/6W 4.7K OHM J
RS02	24366562	RESISTOR, CARBON FILM SB 1/6W 5.6K J
RS04	24366562	RESISTOR, CARBON FILM SB 1/6W 5.6K J
RS08	24366562	RESISTOR, CARBON FILM SB 1/6W 5.6K J
RS10	24366562	RESISTOR, CARBON FILM SB 1/6W 5.6K J
RS14	24366562	RESISTOR, CARBON FILM SB 1/6W 5.6K J
RS16	24366562	RESISTOR, CARBON FILM SB 1/6W 5.6K J
RS21	24366472	RESISTOR, CARBON FILM, 1/6W 4.7K OHM J
RS24	24366562	RESISTOR, CARBON FILM SB 1/6W 5.6K J
RS25	24366562	RESISTOR, CARBON FILM SB 1/6W 5.6K J
RS26	24366562	RESISTOR, CARBON FILM SB 1/6W 5.6K J
RS40	24366272	RESISTOR, CARBON FILM, 1/6W 2.7K OHM J
RS42	24366272	RESISTOR, CARBON FILM, 1/6W 2.7K OHM J
RS43	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
RS43	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
RS44	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
RS44	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
RS60	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
RS60	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
RS61	24366222	RESISTOR, CARBON FILM, 1/6W 2.2K OHM J
RS62	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
RS62	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
RS63	24366222	RESISTOR, CARBON FILM, 1/6W 2.2K OHM J
RS64	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
RS65	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
RS66	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
RS68	24366223	RESISTOR, CARBON FILM, 1/6W 22K OHM J

Location No.	Part No.	Description
RS69	24366223	RESISTOR, CARBON FILM, 1/6W 22K OHM J
RS70	24366104	RESISTOR, CARBON FILM SB 1/6W 100K J
RS71	24366104	RESISTOR, CARBON FILM SB 1/6W 100K J
RS101	24366123	RESISTOR, CARBON FILM, 1/6W 12K OHM J
RS101	24366332	RES1STOR, CARBON F1LM, 1/6 3.3K OHM J
RS102	24366123	RESISTOR, CARBON FILM, 1/6W 12K OHM J
RS102	24366332	RES1STOR, CARBON F1LM, 1/6 3.3K OHM J
RS105	24366332	RES1STOR, CARBON F1LM, 1/6 3.3K OHM J
RS107	24366473	RESISTOR, CARBON FILM, 1/6W 47K OHM J
RS108	24366473	RESISTOR, CARBON FILM, 1/6W 47K OHM J
RS109	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
RS109	24366123	RESISTOR, CARBON FILM, 1/6W 12K OHM J
RS111	24366222	RESISTOR, CARBON FILM, 1/6W 2.2K OHM J
RS113	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
RS113	24366123	RESISTOR, CARBON FILM, 1/6W 12K OHM J
RS115	24366222	RESISTOR, CARBON FILM, 1/6W 2.2K OHM J
RS611	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
RS612	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
RS613	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
RS614	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
RV02	24366750	RESISTOR, CARBON FILM, 1/6W 75 OHM J
RV04	24366750	RESISTOR, CARBON FILM, 1/6W 75 OHM J
RV05	24366750	RESISTOR, CARBON FILM, 1/6W 75 OHM J
RV07	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
RV09	24366750	RESISTOR, CARBON FILM, 1/6W 75 OHM J
RV10	24366750	RESISTOR, CARBON FILM, 1/6W 75 OHM J
RV11	24366100	RESISTOR, CARBON FILM, 1/6W 10 OHM J
RV12	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
RV13	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
RV17	24366750	RESISTOR, CARBON FILM, 1/6W 75 OHM J
RV18	24366750	RESISTOR, CARBON FILM, 1/6W 75 OHM J
RV19	24366332	RES1STOR, CARBON F1LM, 1/6 3.3K OHM J
RV19	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
RV20	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
RV21	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
RV22	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
RV35	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
RV36	24366103	RESISTOR, CARBON FILM, 1/6W 10K OHM J
RV36	24366222	RESISTOR, CARBON FILM, 1/6W 2.2K OHM J
RV60	24552101	RESISTOR, OXIDE METAL FILM, 1/2W 100 OHM J
RV61	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
RV62	24366750	RESISTOR, CARBON FILM, 1/6W 75 OHM J
RV63	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
RV63	24366221	RESISTOR, CARBON FILM, 1/6W 220 OHM J
RV120	24366750	RESISTOR, CARBON FILM, 1/6W 75 OHM J
RW01	24366750	RESISTOR, CARBON FILM, 1/6W 75 OHM J
RW02	24366750	RESISTOR, CARBON FILM, 1/6W 75 OHM J
RW03	24366750	RESISTOR, CARBON FILM, 1/6W 75 OHM J
RY11	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J

	Location No.	Part No.	Description
	RY12	24366102	RESISTOR, CARBON FILM, 1/6W 1K OHM J
	RZ01	24872102	RESISTOR, CHIP, METAL FILM, 1/16W 1K OHM J
	RZ02	24872102	RESISTOR, CHIP, METAL FILM, 1/16W 1K OHM J
	RZ03	24872332	RESISTOR, METAL FILM CHIP 1/16W 3R3K J
	RZ04	24872122	RESISTOR, CHIP, METAL FILM, 1/16W 1.2K OHM J
	RZ05	24872471	RESISTOR, METAL FILM CHIP 1/16W 470 J
	RZ06	24872821	RESISTOR, METAL FILM CHIP 1/16W 820 J
	RZ08	24872122	RESISTOR, CHIP, METAL FILM, 1/16W 1.2K OHM J
	RZ09	24872101	RESISTOR, CHIP, METAL FILM, 1/16W 100 OHM J
	RZ10	24872471	RESISTOR, METAL FILM CHIP 1/16W 470 J
	RZ12	24872332	RESISTOR, METAL FILM CHIP 1/16W 3R3K J
	RZ13	24872122	RESISTOR, CHIP, METAL FILM, 1/16W 1.2K OHM J
	RZ14	24872391	RESISTOR, METAL FILM CHIP 1/16W 390 J
	RZ15	24872391	RESISTOR, METAL FILM CHIP 1/16W 390 J
	RZ17	24872471	RESISTOR, METAL FILM CHIP 1/16W 470 J
	RZ18	24872122	RESISTOR, CHIP, METAL FILM, 1/16W 1.2K OHM J
	RZ19	24872332	RESISTOR, METAL FILM CHIP 1/16W 3R3K J
	RZ20	24872101	RESISTOR, CHIP, METAL FILM, 1/16W 100 OHM J
	RZ22	24872471	RESISTOR, METAL FILM CHIP 1/16W 470 J
	RZ29	24872331	RESISTOR, METAL FILM CHIP 1/16W 330 J
	RZ30	24872331	RESISTOR, METAL FILM CHIP 1/16W 330 J
			COILS & TRANSFORMERS
	L101	23289845	COIL, PEAKING 68.00MMHJ COLTRF4680AT
	L301	23103880	COIL, CHOKE, TEM2011Y
	L302	23237975	COIL, PEAKING-100MMH J COLTRF4101AC
	L400	23238714	COIL, PEAKING, TRF4100AJ
⚠	L441	23233045	COIL, HOLIZ. LINEARITY TLN2083G
	L442	23248122	COIL, CHOKE TLN3384D
⚠	L447	23248282	COIL, CHOKE 17X29H 68MMH TLN3458AH
⚠	L447	23248286	COIL, CHOKE 17X29H 150MMH TLN3516AH
⚠	L461	23248115	COIL, CHOKE, TLN3367D
⚠	L461	23248179	COIL, CHOKE TLN3339AD
	L491	23228785	TRANSFORMER, DPC EI24 54.8UH TPC1016AH
	L500	23289840	COIL, PEAKING, TRF4100AT
	L501	23289844	COIL, PEAKING 47.00MMHJ COLTRF4470AT
	L502	23289844	COIL, PEAKING 47.00MMHJ COLTRF4470AT
	L702	23261974	COIL, FERRITE BEAD, HC5-035
	L704	23103859	COIL, CHOKE, EM2011
	L705	23103859	COIL, CHOKE, EM2011
	L805	23248227	COIL, CHOKE, TLN3481AD
	L806	23248227	COIL, CHOKE, TLN3481AD
	L815	23103880	COIL, CHOKE, TEM2011Y
	L816	23103880	COIL, CHOKE, TEM2011Y
	L883	23103880	COIL, CHOKE, TEM2011Y
	L885	23248073	COIL, CHOKE, TLN3299D
	L886	23103880	COIL, CHOKE, TEM2011Y
	L901	23200454	COIL, DG0.65CU 42T-2LOOP TSB-2412AK
	L902	23289101	COIL, PEAKING, TRF4101AF

	Location No.	Part No.	Description
	L903	23289101	COIL, PEAKING, TRF4101AF
	L904	23289101	COIL, PEAKING, TRF4101AF
	L905	23289390	COIL, PEAKING, TRF4390AF
	L906	23289390	COIL, PEAKING, TRF4390AF
	L907	23289390	COIL, PEAKING, TRF4390AF
	L908	23289100	COIL, PEAKING, TRF4100AF
	L910	23237991	COIL, PEAKING, TRF4479AC
	LA01	23289100	COIL, PEAKING, TRF4100AF
	LA28	23103775	COIL, FERRITE CHOKE, TEM2014
	LJ901	23200461	COIL, TSB-2411AT
	LJ901	23200465	COIL, GEOMAGNETIC CORRECTION TSB-2411AG
	LV01	23289840	COIL, PEAKING, TRF4100AT
	LV02	23103852	COIL, COMMONMODE TEM2028AH
	LV19	23289560	COIL, PEAKING, TRF4560AF
	LV99	23103845	COIL, COMMONMODE, TEM2030AY
	LZ01	23238710	COIL, PEAKING, TRF4220AJ
	LZ02	23238714	COIL, PEAKING, TRF4100AJ
	LZ03	23238714	COIL, PEAKING, TRF4100AJ
	LZ04	23238714	COIL, PEAKING, TRF4100AJ
	LZ05	23238714	COIL, PEAKING, TRF4100AJ
	LZ08	23238707	COIL, PEAKING, TRF4390AJ
	LZ11	23238710	COIL, PEAKING, TRF4220AJ
	LZ12	23238710	COIL, PEAKING, TRF4220AJ
	T400	23224364	TRANSFORMER, TLN2168AH
	T401	23224367	TRANSFORMER, HORIZ.DRIVER, TLN1098AH
⚠	T461Z	23236645	TRANSFORMER, FLY-BACK TFB4166ZD
	T801	23211739	COIL, LINE FILTER TRF3229AL
	T840	23213513	TRANSFORMER
	T862	23217526	TRANSFORMER, CONVERTER TPW3482AE
			SEMICONDUCTORS
	Q201	23114528	TRANSISTOR, 2SC1740S
	Q202	23114433	TRANSISTOR, 2SC1815-Y
	Q203	23114433	TRANSISTOR, 2SC1815-Y
	Q204	23114460	TRANSISTOR, RN1204
	Q205	23114460	TRANSISTOR, RN1204
	Q300	23114528	TRANSISTOR, 2SC1740S
	Q301	23905610	IC, LA7846N
	Q301B	72471082	SCREW, 3X10MM
	Q302	B0385853	E-W CORRECTION IC NDIP 24
	Q306	23114530	TRANSISTOR, 2SA933S
	Q307	23114528	TRANSISTOR, 2SC1740S
	Q308	23114528	TRANSISTOR, 2SC1740S
	Q360	23114528	TRANSISTOR, 2SC1740S
	Q361	23314445	TRANSISTOR, 2SC4721, Q
	Q370	23114530	TRANSISTOR, 2SA933S
	Q391	23314548	TRANSISTOR, 2SC4256
	Q402	23114755	TRANSISTOR, 2SC2482FA-1
	Q403	23314444	2SC4721, P

	Location No.	Part No.	Description
	Q404	23314955	TRANSITOR, 2SD2553(FA)
	Q404B	72471082	SCREW, 3X10MM
	Q421	23314707	TRANSISTOR, 2SD1944, H
	Q421B	23035308	SCREW, 3X8MM, TAPPING
	Q462	23114530	TRANSISTOR, 2SA933S
	Q463	23314938	TRANSISTOR, 2SD2493(P)
	Q463B	72471082	SCREW, 3X10MM
	Q465	23114433	TRANSISTOR, 2SC1815-Y
	Q465	23114530	TRANSISTOR, 2SA933S
	Q470	23114528	TRANSISTOR, 2SC1740S
	Q471	23114426	TRANSISTOR, VCEO-50 IC0.8A TO92 2SA1015-O(TEM
	Q472	23114433	TRANSISTOR, 2SC1815-Y
	Q480	23114759	TRANSISTOR, 2SA949-Y
	Q481	23114433	TRANSISTOR, 2SC1815-Y
	Q482	23114433	TRANSISTOR, 2SC1815-Y
	Q483	23114469	TRANSISTOR, R1=R2=4.7K-OHM TO92SRN2201
	Q501	23906843	IC, NTSC VCDE IC N-DIP 56 TA1310N
	Q503	23114528	TRANSISTOR, 2SC1740S
	Q610	23000249	IC, TV SOUND OUT M-SIP 10PIN TA8265K
	Q610B	70391356	SCREW
	Q611	23114623	TRANSISTOR, 2SC2878-A(TEM
	Q612	23314962	TRANSISTOR, KTA1266 Y
	Q613	23114623	TRANSISTOR, 2SC2878-A(TEM
	Q706	23114433	TRANSISTOR, 2SC1815-Y
	Q707	23114528	TRANSISTOR, 2SC1740S
	Q709	23114528	TRANSISTOR, 2SC1740S
	Q710	23114530	TRANSISTOR, 2SA933S
	Q710	23314055	TRANSISTOR, 2SA564A-Q,TH
	Q711	A6550640	TRANSISTOR, 2SA1837
	Q712	A6369650	TRANSISTOR, 2SC4793
	Q719	23114528	TRANSISTOR, 2SC1740S
	Q720	23114528	TRANSISTOR, 2SC1740S
	Q801	23135025	IC, HYBRID VDSS=450V STR-F6426SF2
	Q801B	72471082	SCREW, 3X10MM
	Q805	23114459	TRANSISTOR, RN1205
	Q830	23314141	TRANSISTOR, 2SC3852
	Q830B	23035308	SCREW, 3X8MM, TAPPING
	Q840	23318299	IC, L78MR05-FA
	Q843	23114459	TRANSISTOR, RN1205
	Q850	23314707	TRANSISTOR, 2SD1944, H
	Q862	23000823	PHOTO COUPLER, CTR=(100-300)% TLP421F(GR)
	Q862A	23960136	SILICONE, TSE3843-W, ADHESIVE
⚠	Q883	23319692	IC, ERROR AMP. VS=130.2V TO220A SE130N, LF4
	Q901	23314780	TRANSISTOR, 2SC4544
	Q902	23114433	TRANSISTOR, 2SC1815-Y
	Q903	23314780	TRANSISTOR, 2SC4544
	Q904	23114433	TRANSISTOR, 2SC1815-Y
	Q905	23314780	TRANSISTOR, 2SC4544
	Q906	23114433	TRANSISTOR, 2SC1815-Y

Location No.	Part No.	Description
Q907	23114530	TRANSISTOR, 2SA933S
Q908	23114429	TRANSISITOR, 2SC2120-Y(TE
Q911	23114528	TRANSISTOR, 2SC1740S
Q912	23114530	TRANSISTOR, 2SA933S
Q913	23114530	TRANSISTOR, 2SA933S
Q914	23114552	TRANSISTOR, 2SC1685-Q, TH
Q920	23114528	TRANSISTOR, 2SC1740S
Q921	23114528	TRANSISTOR, 2SC1740S
Q922	23114528	TRANSISTOR, 2SC1740S
Q923	23114528	TRANSISTOR, 2SC1740S
Q924	23114528	TRANSISTOR, 2SC1740S
Q925	23114528	TRANSISTOR, 2SC1740S
Q4460	23114433	TRANSISTOR, 2SC1815-Y
Q4461	23114433	TRANSISTOR, 2SC1815-Y
Q4462	23114433	TRANSISTOR, 2SC1815-Y
Q4462	23114433	TRANSISTOR, 2SC1815-Y
QA01	23000407	IC, MCU 1CHIP 8BIT 8M 42P TMP88CS38N-1B18
QA01	23000818	IC, MCU 1CHIP 8BIT 8M 42P TMP88CS38N-2C34
QA02	23905665	IC, AT24C08-10PC
QB01	23114433	TRANSISTOR, 2SC1815-Y
QB03	23114459	TRANSISTOR, RN1205
QB03	23114459	TRANSISTOR, RN1205
QB11	23114528	TRANSISTOR, 2SC1740S
QB23	23114433	TRANSISTOR, 2SC1815-Y
QB30	23114433	TRANSISTOR, 2SC1815-Y
QB40	23114433	TRANSISTOR, 2SC1815-Y
QB41	23114433	TRANSISTOR, 2SC1815-Y
QD80	23114530	TRANSISTOR, 2SA933S
QG01	23906499	IC, UPC1851BCU
QG60	23904303	IC, BA10358
QG60	23906596	IC, DUAL OP-AMP DIP8 8P BA4558
QG61	23119228	IC, UPC1406HA
QJ02	23114528	TRANSISTOR, 2SC1740S
QJ03	A6369650	TRANSISTOR, 2SC4793
QJ04	23114528	TRANSISTOR, 2SC1740S
QS60	23314965	TRANSISTOR, KTC3198 Y
QS61	23314965	TRANSISTOR, KTC3198 Y
QS62	23114466	TRANSISTOR, R1=R2=47K-OHM TO92S RN2204
QS63	23114623	TRANSISTOR, 2SC2878-A(TEM
QS64	23114623	TRANSISTOR, 2SC2878-A(TEM
QS101	23904303	IC, BA10358
QS106	23000529	IC, SW 2IN 1OUT 3CIRCUIT 0 CLP MM1231XD
QV01	23000369	IC, A/V SW SDIP-42A MM1495XD
QV05	23114461	TRANSISTOR, RN1203
QV10	23114461	TRANSISTOR, RN1203
QV11	23114437	TRANSISTOR, 2SC752GTM-Y
QV60	23114433	TRANSISTOR, 2SC1815-Y
QZ01	23906904	IC, CMOS MULTI COMB DIP20 TC90A49P
QZ02	A6541132	TRANSISTOR, 2SA1162 -(Y)

	Location No.	Part No.	Description
	QZ03	A6541132	TRANSISTOR, 2SA1162 -(Y)
	QZ04	A6541132	TRANSISTOR, 2SA1162 -(Y)
	QZ05	23114475	TRANSISTOR, 2SC2712. Y
	QZ06	A6541132	TRANSISTOR, 2SA1162 -(Y)
	QZ07	A6541132	TRANSISTOR, 2SA1162 -(Y)
	QZ08	23114475	TRANSISTOR, 2SC2712. Y
	D101	23316755	DIODE, ZENER VZ30.90-32.50 DO34 MTZ J 33C
	D112	23316678	DIODE, ZENER, MTZJ6.8B
	D201	23316817	DIODE,1SS120-7
	D221	23316817	DIODE,1SS120-7
	D222	23316817	DIODE,1SS120-7
	D223	23316817	DIODE,1SS120-7
	D252	23118518	DIODE, ZENER, RD9.1ES
	D253	23118518	DIODE, ZENER, RD9.1ES
	D301	23118095	DIODE, ERB44-06
	D302	23118095	DIODE, ERB44-06
	D303	23316794	DIODE, SC570A
	D310	23118859	DIODE, 1SS133
	D312	23118859	DIODE, 1SS133
	D313	23118859	DIODE, 1SS133
	D314	23118859	DIODE, 1SS133
	D315	23118859	DIODE, 1SS133
	D316	23316679	DIODE, ZENER, MTZ J 6.8C
	D319	23316719	DIODE, ZENER, MTZJ12B
	D335	23316715	DIODE, ZENER, MTZ J 11A
	D336	23316672	DIODE, ZENER, MTZJ5.6B
	D337	23118529	DIODE, RD5.6ES B2
	D338	23316655	DIODE, ZENER, MTZ J 3.0B
	D370	23316672	DIODE, ZENER, MTZJ5.6B
	D371	23118859	DIODE, 1SS133
	D390	23316651	DIODE, ZENER VZ=2.43-2.63V DO34 MTZ J 2.4B
	D395	23316725	DIODE, ZENER, MTZJ15B
	D404	23316254	DIODE, ERC06-15
	D406	23118094	DIODE, EU2A
	D408	23118052	DIODE, RU4Z LF-L1
	D408	23357353	DIODE, VRM=200V IF(AV)=10A FML-G22S
	D409	23316690	DIODE, ZENER, MTZJ10B
	D411	23118520	RD8.2ES B2
	D421	23316665	DIODE, ZENER, MTZ J 4.7A
	D422	23316669	DIODE, ZENER, MTZJ5.1B
	D430	23118510	RD12ES
	D441	23316687	DIODE, ZENER, MTZJ9.1B
	D442	23118094	DIODE, EU2A
	D460	23316969	DIODE, VRRM=600V IO=2.5A ERD29-06
	D467	23118095	DIODE, ERB44-06
	D468	23316719	DIODE, ZENER, MTZJ12B
	D470	23118859	DIODE, 1SS133
	D471	23118095	DIODE, ERB44-06
⚠	D472	23115774	DIODE, ZENER, RD6.2E(FA-1)

Location No.	Part No.	Description
D473	23118859	DIODE, 1SS133
D480	23316727	DIODE, ZENER VZ14.80-15.57 DO34 MTZ J 16A
D611	23118859	DIODE, 1SS133
D612	23118859	DIODE, 1SS133
D613	23118859	DIODE, 1SS133
D614	23118859	DIODE, 1SS133
D704	23118859	DIODE, 1SS133
D705	23118859	DIODE, 1SS133
D715	23118859	DIODE, 1SS133
D720	23118859	DIODE, 1SS133
D721	23118859	DIODE, 1SS133
D801	23357041	DIODE, LN6SB60-F05
D805	23118859	DIODE, 1SS133
D806	23118094	DIODE, EU2A
D807	23118859	DIODE, 1SS133
D810	70213235	DIODE, SCHOTTKY, AK06
D815	23316746	DIODE, ZENER, MTZJ27B
D830	23316673	DIODE, ZENER, MTZJ5.6C
D840	23316962	DIODE, S1WBA20
D845	23118859	DIODE, 1SS133
D850	23316673	DIODE, ZENER, MTZJ5.6C
D855	23118859	DIODE, 1SS133
D881	23118859	DIODE, 1SS133
D883	23118338	DIODE, RU4AM LF-K2
D885	23118094	DIODE, EU2A
D899	24019486	VARISTOR, V1=430V 2570A/2TIMES ENE431D-10A
D901	23118859	DIODE, 1SS133
D903	23118859	DIODE, 1SS133
D904	23118859	DIODE, 1SS133
D905	23118859	DIODE, 1SS133
D906	23118859	DIODE, 1SS133
D907	23118859	DIODE, 1SS133
D908	23118859	DIODE, 1SS133
D909	23118859	DIODE, 1SS133
D910	23118859	DIODE, 1SS133
D911	A7568250	DIODE, 1S1834
D3440	A7568200	DIODE, SILICON 1.5KV 0.7A 1S1832
D3441	A7568200	DIODE, SILICON 1.5KV 0.7A 1S1832
D4385	23316680	DIODE, ZENER, MTZJ7.5A
D4386	23118859	DIODE, 1SS133
D4387	23316686	DIODE, ZENER, MTZJ9.1A
DA42	23118529	DIODE, RD5.6ES B2
DB01	23358501	LED, LAMP RED IV=61-240MCD SCL-003URC5FXFGH
DB01	23358564	LED, LAMP RED SLR-56VC3FPQ
DB03	23358522	DIODE, LED, SIR-56SB3F
DB03	23358522	DIODE, LED, SIR-56SB3F
DB05	23316675	DIODE, ZENER, MTZJ6.2B
DB30	23118859	DIODE, 1SS133
DB45	23316817	DIODE,1SS120-7

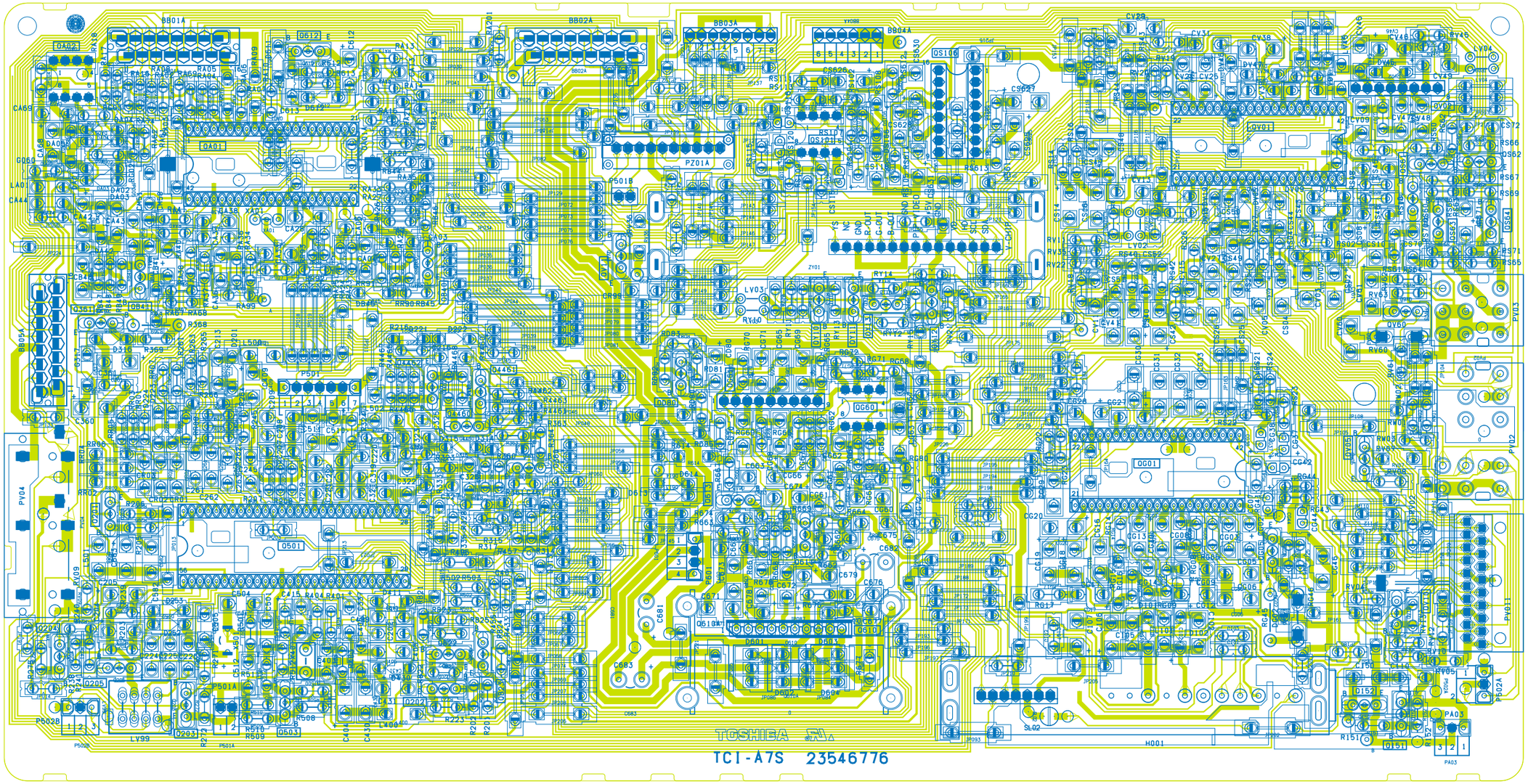
Location No.	Part No.	Description
DE50	23358501	LED, LAMP RED IV=61-240MCD SCL-003URC5FXFGH
DJ01	23316817	DIODE,1SS120-7
DJ02	23118504	DIODE, RD15ES B3
DS106	23316660	DIODE, ZENER, MTZ J 3.9A
DV03	23118518	DIODE, ZENER, RD9.1ES
DV05	23118518	DIODE, ZENER, RD9.1ES
DV13	23118518	DIODE, ZENER, RD9.1ES
DV15	23118518	DIODE, ZENER, RD9.1ES
DV19	23118518	DIODE, ZENER, RD9.1ES
DV26	23316716	DIODE, ZENER, MTZJ11B
DV27	23118518	DIODE, ZENER, RD9.1ES
DV45	23118518	DIODE, ZENER, RD9.1ES
DV46	23316716	DIODE, ZENER, MTZJ11B
DV47	23316686	DIODE, ZENER, MTZJ9.1A
		MISCELLANEOUS
B230	23037312	SCREW
B231	23035412	SCREW
B232	23035312	SCREW
BB01A	23713201	CONNECTOR
BB01B	23713202	CONNECTOR
BB02A	23713201	CONNECTOR
BB02B	23713202	CONNECTOR
BB03A	23903022	CONNECTOR, BASE B-B 8P 2.5 JST 08R-2.5FJ-P
BB03B	23903022	CONNECTOR, BASE B-B 8P 2.5 JST 08R-2.5FJ-P
BB03C	23368627	CONNECTOR, BRIDGE B-B 8P 2.5JST 08TM-2.5FJ-E
BB04A	23902749	CONNECTOR
BB04B	23368517	CONNECTOR
BB05A	23713201	CONNECTOR
BB14B	23713013	BASE SOCKET 16P 1.5
BB16A	23903022	CONNECTOR, BASE B-B 8P 2.5 JST 08R-2.5FJ-P
BB16B	23903022	CONNECTOR, BASE B-B 8P 2.5 JST 08R-2.5FJ-P
F424	23144454	FUSE, AXIAL 125V 2.0A
F470	23144731	FUSE, CARTRIDGE, 5.2X20, 1.6A 125V
F470	23144785	FUSE, CARTRIDGE 5.2X20 125V 1.25A
F470A	23165433	FUSE HOLDER, 5.2 SOC
F801	23144745	FUSE, 10.0A UL
F801A	23165433	FUSE HOLDER, 5.2 SOC
F802	23144734	FUSE, CARTRIDGE, 5.2X20, 125V 4.0A
F802A	23165433	FUSE HOLDER, 5.2 SOC
G060	24366470	RESISTOR, CARBON FILM, 1/6W 47 OHM J
G113	23289220	COIL, PEAKING, TRF4220AF
G217	24366303	RESISTOR, CARBON FILM, 1/6W 30K OHM J
G217	24366333	RESISTOR, CARBON FILM, 1/6W 33K OHM J
G301	24366472	RESISTOR, CARBON FILM, 1/6W 4.7K OHM J
G306	24366222	RESISTOR, CARBON FILM, 1/6W 2.2K OHM J
G307	24366152	RESISTOR, CARBON FILM, 1/6W 1.5K OHM J
G312	24366272	RESISTOR, CARBON FILM, 1/6W 2.7K OHM J

	Location No.	Part No.	Description
	G317	23118859	DIODE, 1SS133
	G380	24946226	RESISTOR, CARBON CONPOSITI0N, 1/2W 22M OHM K
	G403	24946223	RESISTOR, CARBON COMPOSITION GF 1/2W 22K K
	G405	24214472	CAPACITOR, CERAMIC DISK CK45 B 500V 4700PF K
	G463	23103880	COIL, CHOKE, TEM2011Y
	G808	23248227	COIL, CHOKE, TLN3481AD
⚠	G884	23316681	DIODE, ZENER, MTZJ7.5B
	G890	23248247	COIL, CHOKE, TLN3499AH
	G891	23248247	COIL, CHOKE, TLN3499AH
	G3369	24366101	RESISTOR, CARBON FILM, 1/6W 100 OHM J
	H003	23364765	CONNECTOR ASSY
	H003	23365089	CONNECTOR ASSY
	H003A	23740989	NUT
	J400A	23960136	SILICONE, TSE3843-W, ADHESIVE
	KB01	23906805	IC, REMOTE PHOTO RECIEVER PIC-TB17
	KB01	23906805	IC, REMOTE PHOTO RECIEVER PIC-TB17
	M461A	23192944	ANODECAP ASSEMBLY, TCCP5161
	M461B	23505090	CABLE, CABLE FOCUS
	M461C	23505089	CABLE, CABLE FOCUS
	M461D	23504719	CABLE, CABLE SCREEN
	P601	23369104	PC BOARD ASSY, PB0852-1
	P801	23372112	POWER CORD, U/C 125V10A HSV 1 CMC-02P
	P910	23164725	PLUG, 2P
	PV02	23365763	JACK, PIN, 3P
	PV02	23365819	JACK
	PV02	23365949	JACK, 5P, 1E:OFF+2R:OFF+2L:OFF, JALC
	PV03	23365821	PIN JACK, (1E:OFF+1R:OFF+1L:OFF JACK 3P
	PV04	23365763	JACK, PIN, 3P
	PV011	23365274	JACK, PIN JACK 2S6P 2S6P
	PV011	23365863	JACK, PIN JACK 2S6P JXT1140-01008
	PZ01	23368130	CONNECTOR, 10P
	PZ01A	23902213	CONNECTOR, 10P
	SA01	23145227	SWITCH, PUSH, 1C1P
	SA01	23145430	SWITCH, PUSH SKHHLMA010
	SA02	23145227	SWITCH, PUSH, 1C1P
	SA02	23145430	SWITCH, PUSH SKHHLMA010
	SA03	23145227	SWITCH, PUSH, 1C1P
	SA03	23145430	SWITCH, PUSH SKHHLMA010
	SA04	23145227	SWITCH, PUSH, 1C1P
	SA04	23145430	SWITCH, PUSH SKHHLMA010
	SA05	23145227	SWITCH, PUSH, 1C1P
	SA05	23145430	SWITCH, PUSH SKHHLMA010
	SA06	23145227	SWITCH, PUSH, 1C1P
	SA06	23145430	SWITCH, PUSH SKHHLMA010
	SA07	23145227	SWITCH, PUSH, 1C1P
	SA07	23145430	SWITCH, PUSH SKHHLMA010
	SA08	23145227	SWITCH, PUSH, 1C1P
	SA08	23145430	SWITCH, PUSH SKHHLMA010
	SJ01	23146958	RELAY

	Location No.	Part No.	Description
	SR81	23146564	RELAY, DC12V, TV5, DG-3
	SR83	23146564	RELAY, DC12V, TV5, DG-3
	V901A	23903145	SOCKET, WFOCUS ISD35SE INCHANG ISD-35S-E
	W661	23351088	SPEAKER, SPK1360, 60X120 8-OHM 5W
	W662	23351088	SPEAKER, SPK1360, 60X120 8-OHM 5W
	X401	23153721	CERAMIC RESONATOR, 503KHZ
	X501	23153961	CRYSTAL, 3.58MHZ
	XA01	23153504	CERAMIC RESONATOR, 8.00MHZ 25OHM
	XA01	23153504	CERAMIC RESONATOR, 8.00MHZ 25OHM
	Z401	23140203	SPARK GAP, 2.0-3.0KV C-010 AG20PC152F-L3N
			PC BOARD ASSEMBLIES
✻	U801	23708391	PC BOARD ASSY, PCB PWR/D0154B PD0154B
✻	U901	23708395	PC BOARD ASSY, CRT/D PB9973A
✻	U901	23708502	PC BOARD ASSY, PCB CRT/D9973B PB9973B
✻	U902	23708410	PC BOARD ASSY, SIGNALPD0155 PD0155A 32AF4
✻	U905	23786166	PC BOARD ASSY, PW UNIT 3LINE B PB9398A
✻	UA01	23786539	PC BOARD ASSY, PCB CNT1 PD0150B
✻	UA02	23786540	PC BOARD ASSY, PCB CNT2 PD151 32AF41
			PICTURE TUBE
⚠	V901	23312930	PICTURE TUBE, ITC32VRF LH0.97 A80ERF031X13
			TUNER
	H001	23321410	TUNER, TIF 181CH IIC PH SAIKO EL969L
			ACCESSORIES
	K912	23306359	REMOCON HAND UNIT IR, CTVUSA CT-90037
	Y101	23565273	OWNER'S MANUAL, (ENG.32AF41) 32AF41
	Y101F	23565274	OWNER'S MANUAL, (FRE.32AF41) 32AF41
			CABINET PARTS
	A201	23540658	COVER, FRONT COVER ASSY 32AF41 32AF41
	A213	23427976	DOOR, DOOR 32AF41
	A214	23451976	PUSH CATCH, CLICK
	A411	23540031	COVER, BACK COVER PROPER 32AFX60
	A701	23064255	CARTON, CARTON 32AF60
	A703	23946056	PACKING, TOP PACKING 32AFX60 32AFX60
	A708	23946057	PACKING, BOTTOM PACKING 32AFX60 32AFX60

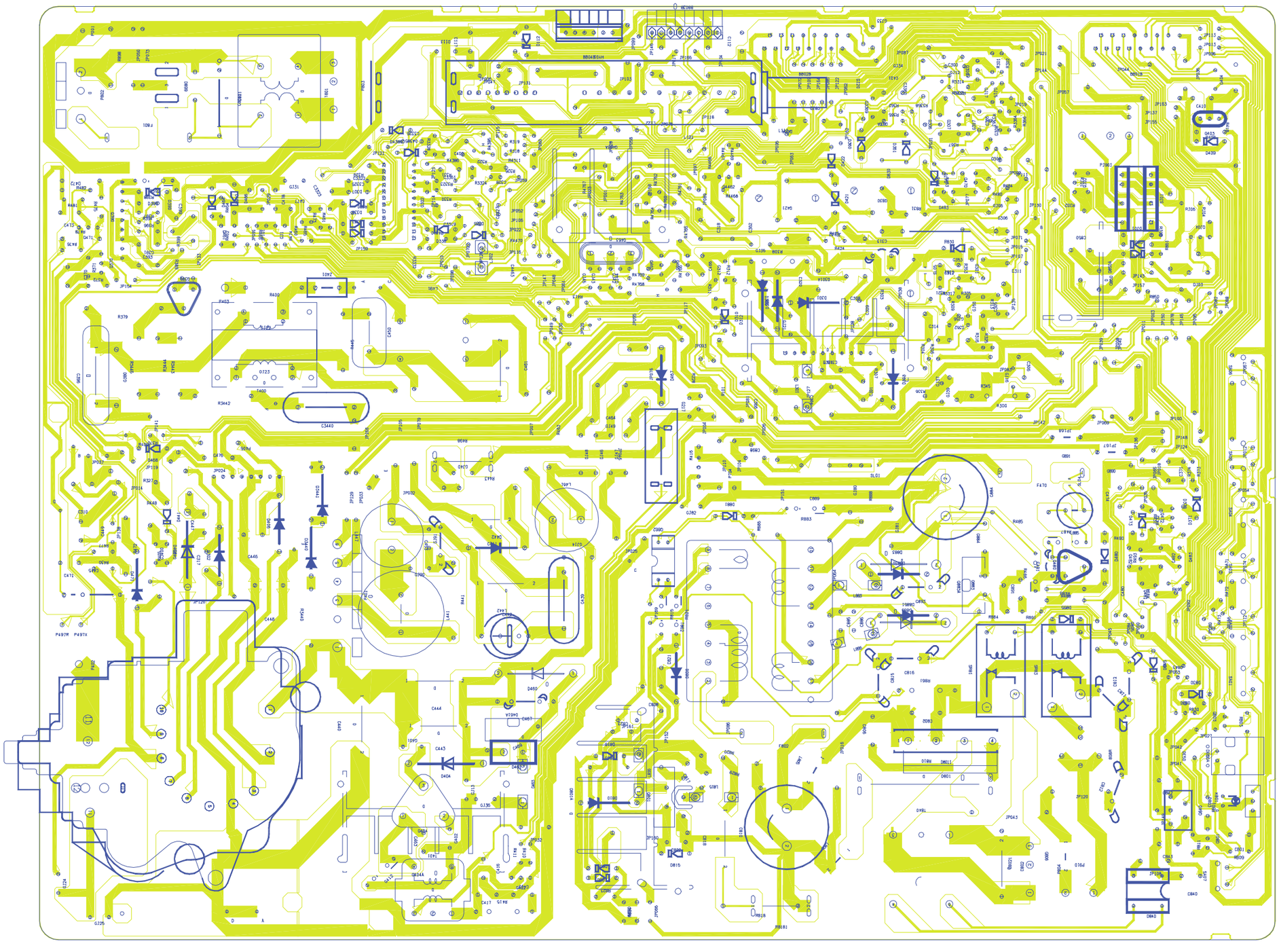
SIGNAL BOARD PD0155

BOTTOM (FOIL) SIDE



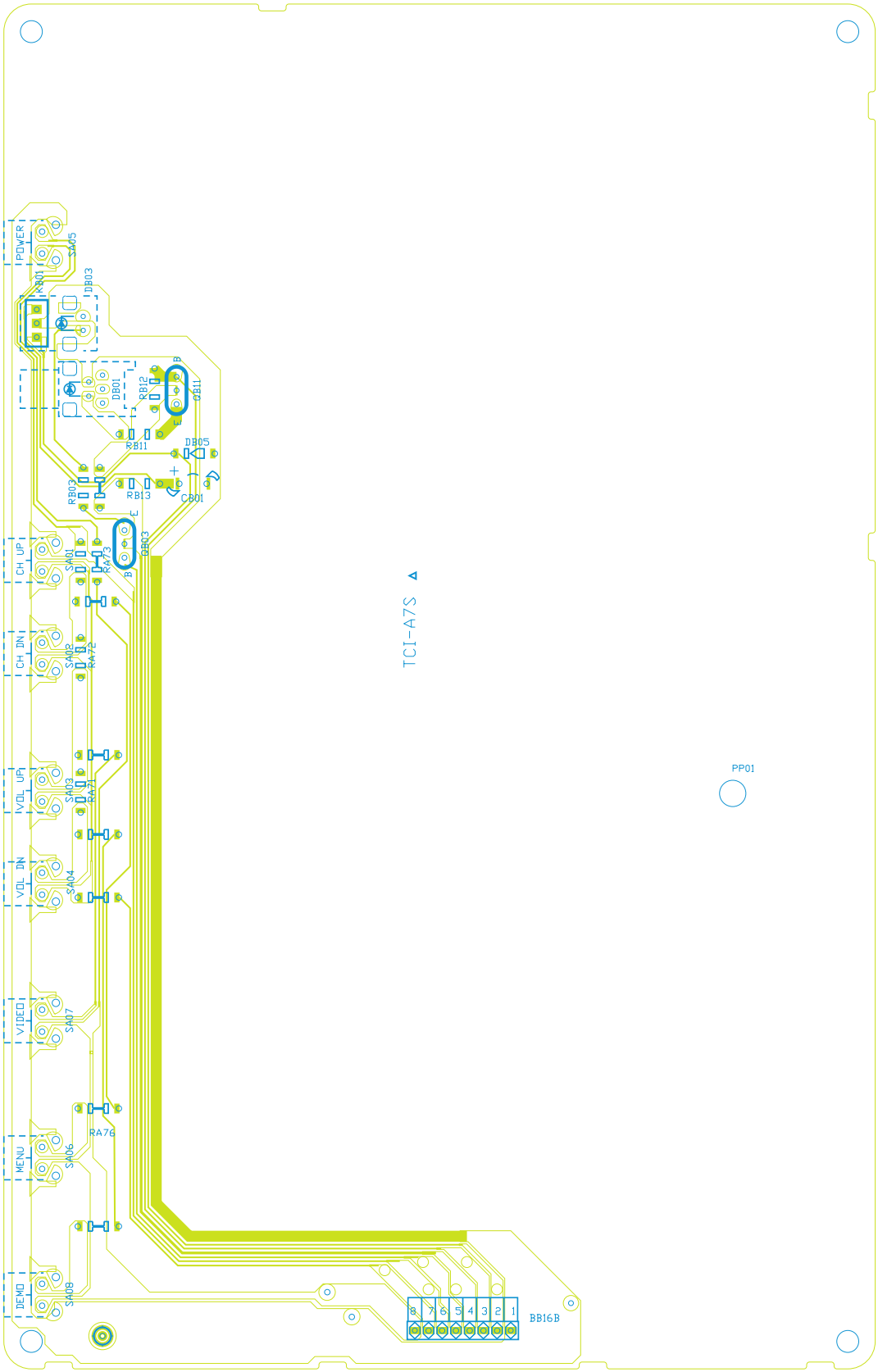
POWER/DEF BOARD PD0154

BOTTOM (FOIL) SIDE



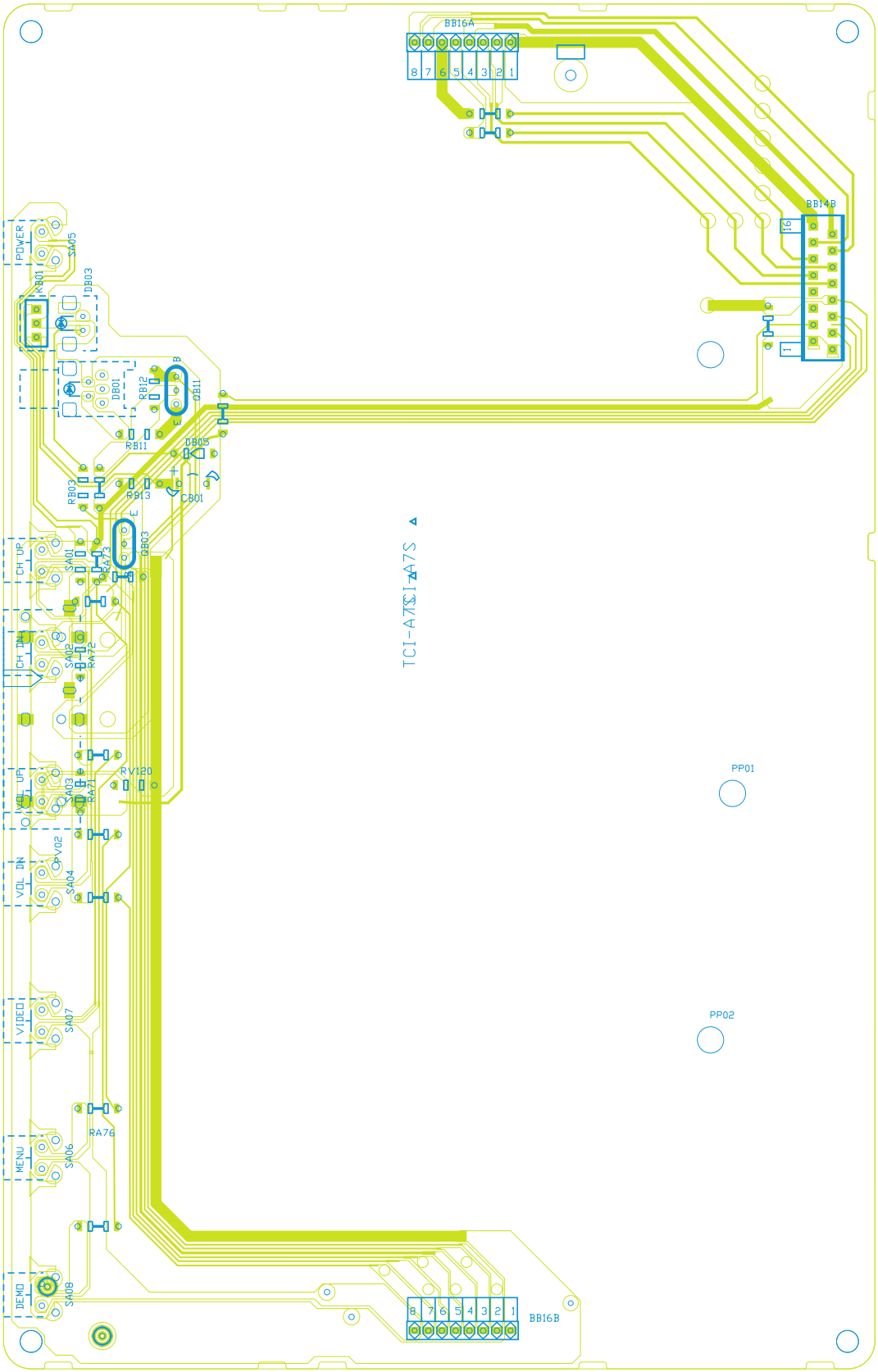
CONTROL-1 BOARD PD0150

BOTTOM (FOIL) SIDE



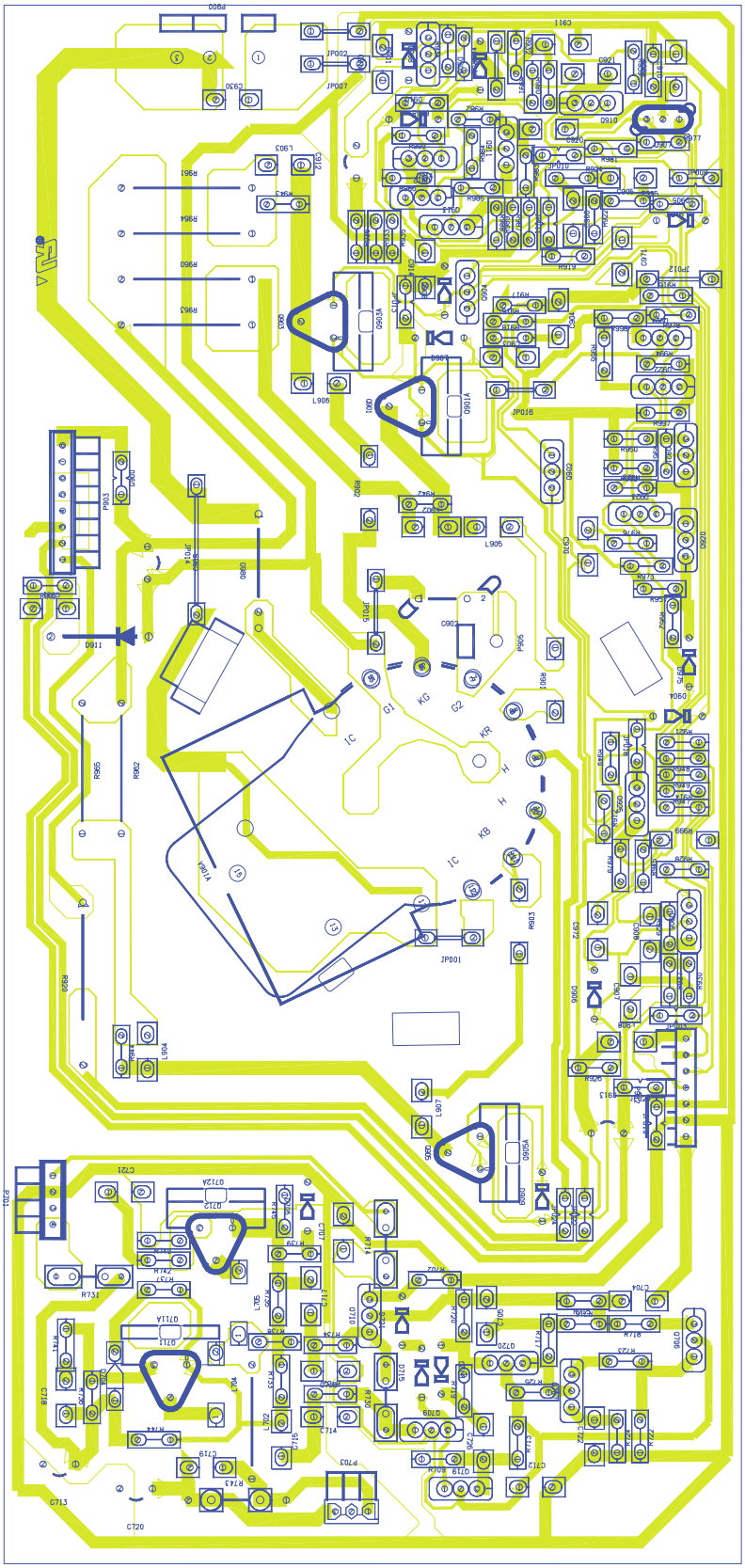
CONTROL-2 BOARD PD0151

BOTTOM (FOIL) SIDE



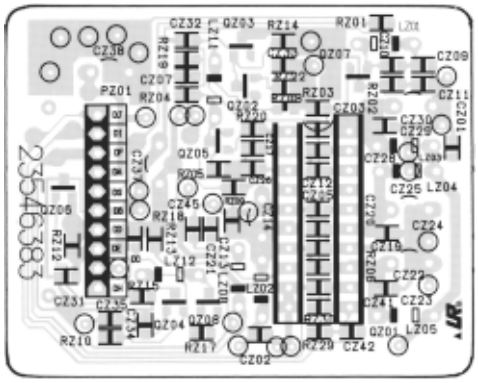
CRT DRIVE BOARD PB9973

BOTTOM (FOIL) SIDE



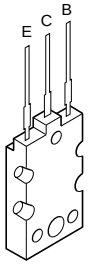
3L DIGI-COMB BOARD PB9398

BOTTOM (FOIL) SIDE

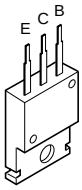


TERMINAL VIEW OF TRANSISTORS

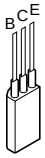
① 2SD2253
(old)
2SC5243



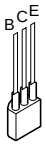
② 2SC3852
2SD1763A
2SC1569
2SC4544
2SA1788
2SA1306
2SA1186A



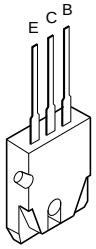
③ 2SC752GTM
2SC2482
2SC2655
2SC4721P



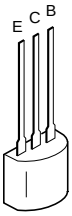
④ 2SC752
2SA562TM
2SA1015
2SC1815
2SC2878
2SC1740S
2SC2120
2SA9335



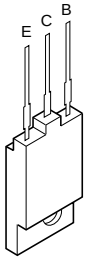
⑤ 2SA1788



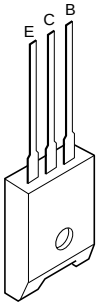
⑥ RN2203
RN2201
RN2004
RN1203
RN1204
RN2204
RN1205
RN1202
RN1201



⑦ 2SD1554
2SD2253
2SD1556
2SD2553
2SC5143



⑧ ON4409



MEMO

MEMO

MEMO

SPECIFICATIONS	
TELEVISION SYSTEM	NTSC standard
CHANNEL COVERAGE	VHF: 2 through 13 UHF: 14 through 69 Cable TV: mid band (A-8 through A-1, A through I) super band (J through W) hyper band (AA through ZZ, AAA, BBB) ultra band (65 through 94, 100 through 125)
POWER SOURCE	120V AC, 60Hz
AUDIO POWER	5W + 5W
SPEAKER TYPE	2-3/8 x 4-3/4 inches (60 x 120 mm)
VIDEO/AUDIO TERMINALS	S-VIDEO INPUT Y: 1V (p-p), 75 ohm, negative sync. C: 0.286V (p-p) (burst signal), 75 ohm VIDEO/AUDIO INPUT VIDEO: 1V(p-p), 75 ohm, negative sync. AUDIO: 150mV(rms) (30% modulation equivalent, 47k ohm) ColorStream™ (Color Difference) VIDEO/AUDIO INPUT Y: 1V (p-p), 75 ohm Cr: 0.7V (p-p), 75 ohm Cb: 0.7V (p-p), 75 ohm AUDIO: 2V (p-p), 1 kohm
DIMENSIONS	Width 875 mm Height 670 mm Depth 575 mm
MASS	66.3 kg

*Please refer to Owner's Manual in details.

TOSHIBA CORPORATION
1-1, SHIBAURA 1-CHOME, MINATO-KU, TOKYO 105-8001, JAPAN

SCHEMATIC DIAGRAM

MODEL : 32AF41 Chassis No. TAC0116

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON THE MANUAL FOR THIS MODEL.

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on the MANUAL for this model. Do not degrade the safety of the receiver through improper servicing.

NOTE:

1. RESISTOR Resistance is shown in ohm [K = 1.000, M = 1.000.000]. All resistors are 1/6W and 5% tolerance carbon resistor, unless otherwise noted as the following marks.
   1/2R = Metal or Metal oxide of 1/2 watt 1/2S = Carbon compsistion of 1/2 watt
   1RF = Fuse resistor of 1 watt 10W = Cement of 10 watt
   K = ±10% G = ±2% F = ±1%
2. CAPACITOR Unless otherwise noted in schematic, all capacitor values less than 1 are expressed in μF, and the values more than 1 in pF.
   All capacitors are ceramic 50V, unless otherwise noted as the following marks.
   Electolytic capacitor Mylar capacitor
3. The parts indicated with " ⚠ " have special characteristics, and should be replaced with identical parts only.
4. Voltages read with DIGITAL MULTI-METER from point indicated to chassing ground, using a color bar signal with all controls at normal, line voltage 120 volts.
5. Waveforms are taken receiving color bar signal with enough sensitivity.
6. Voltage reading shown are nominal values and may vary ±20% except H.V.

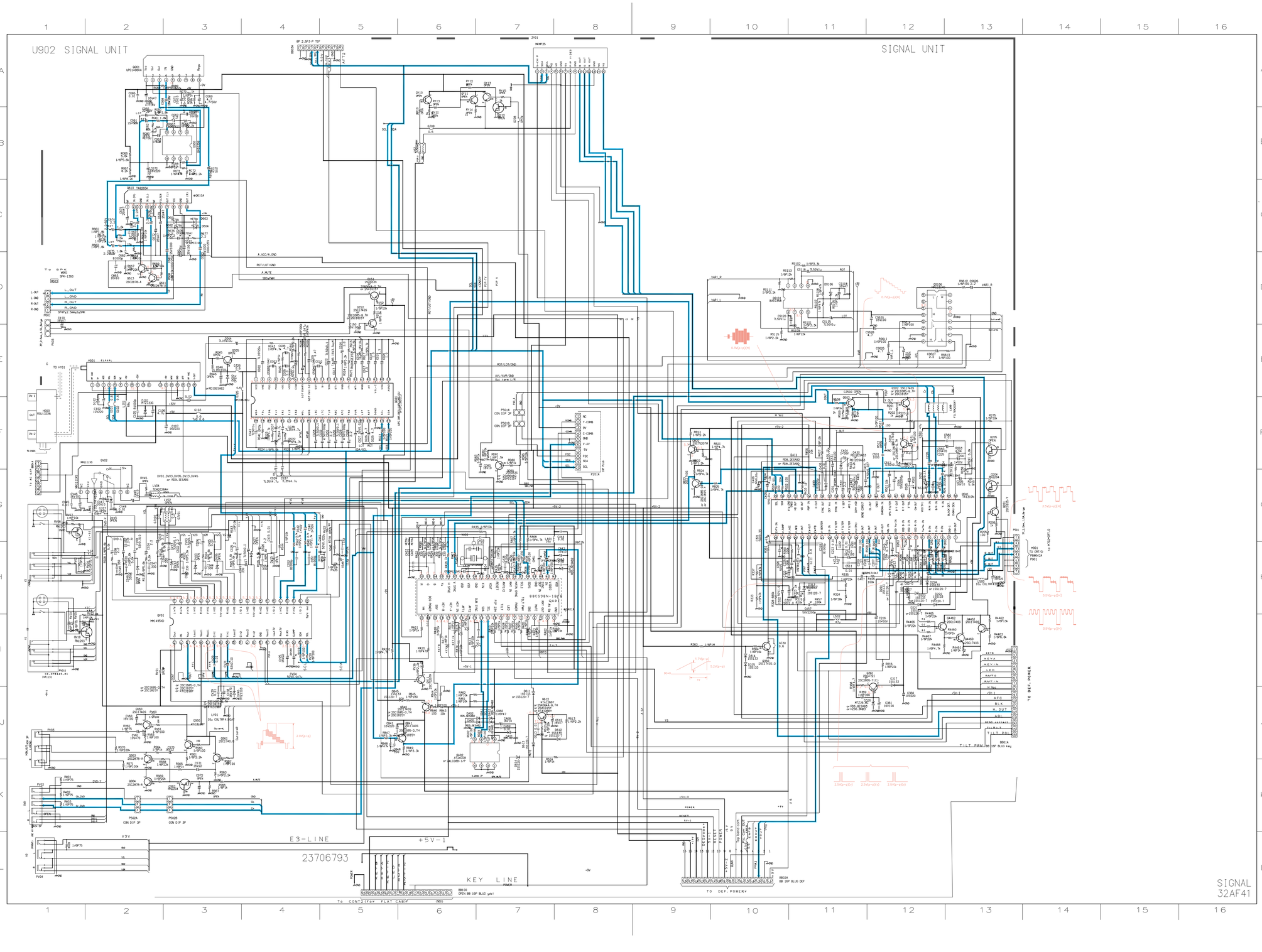
SCHEMATIC DIAGRAM MODEL : 32AF61 Chassis No. TAC0116

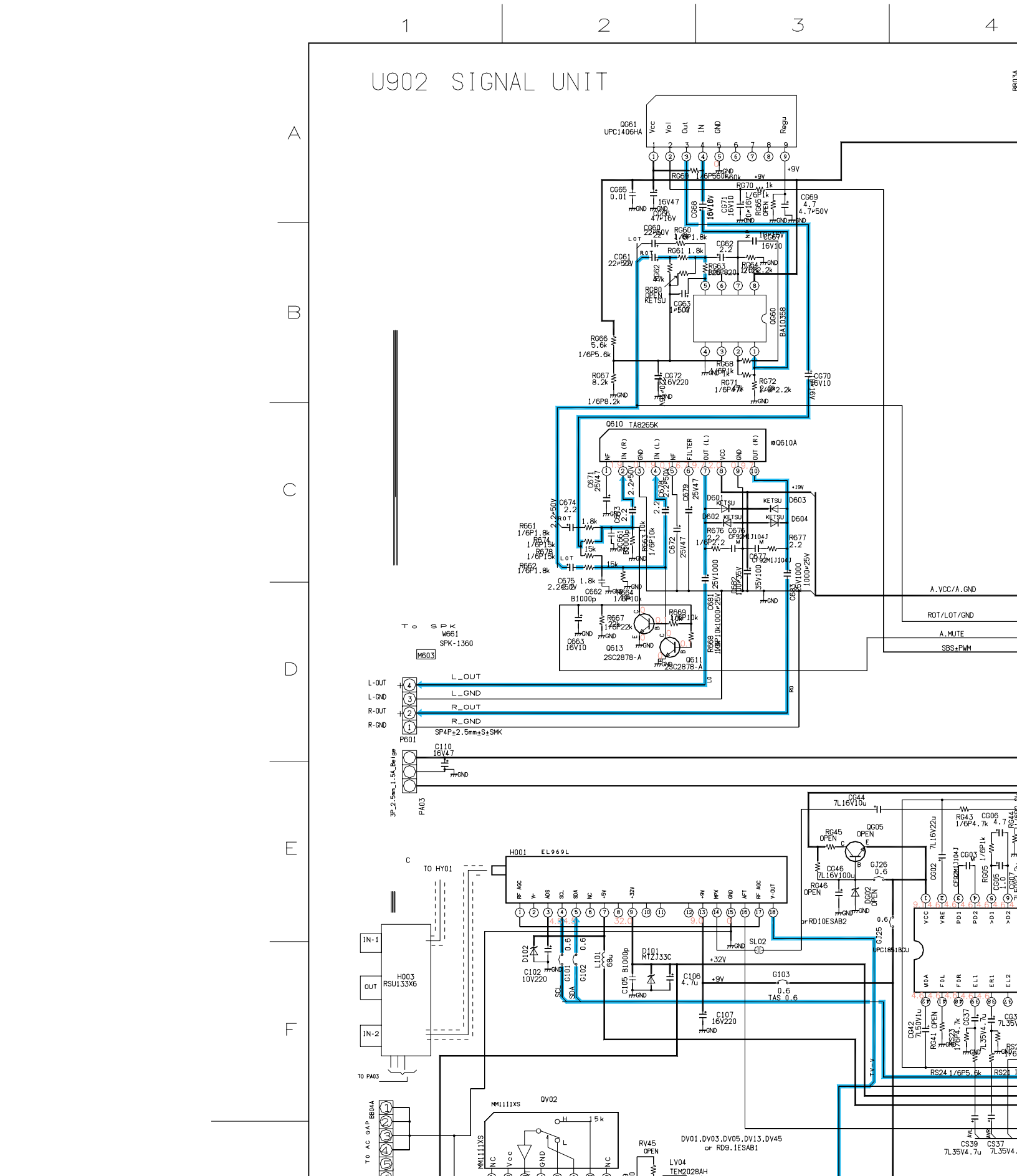
WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON THE MANUAL FOR THIS MODEL.

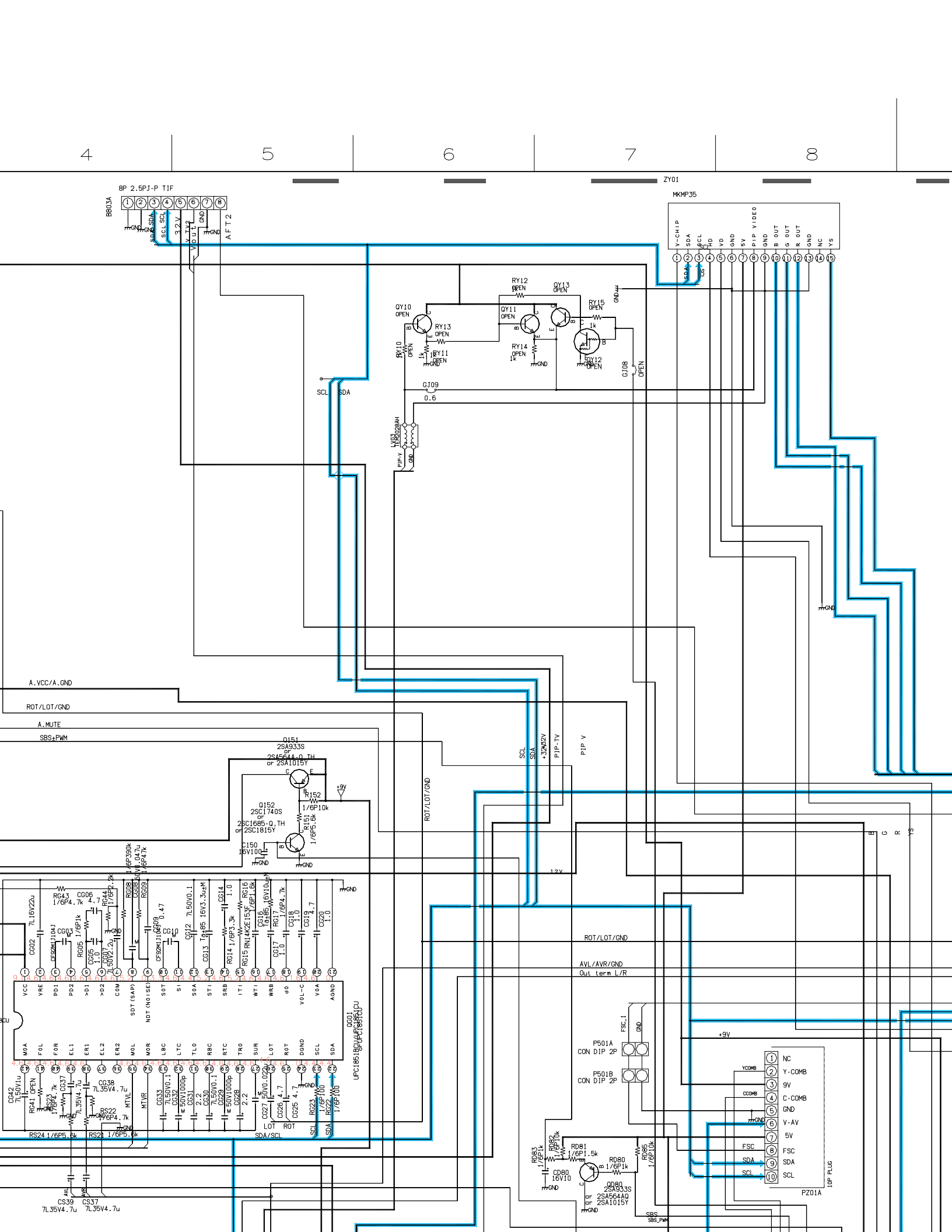
CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on the MANUAL for this model. Do not degrade the safety of the receiver through improper servicing.

NOTE:

1. RESISTOR Resistance is shown in ohm [K = 1.000, M = 1.000.000]. All resistors are 1/6W and 5% tolerance carbon resistor, unless otherwise noted as the following marks.
   1/2R = Metal or Metal oxide of 1/2 watt 1/2S = Carbon compsistion of 1/2 watt
   1RF = Fuse resistor of 1 watt 10W = Cement of 10 watt
   K = ±10% G = ±2% F = ±1%
2. CAPACITOR Unless otherwise noted in schematic, all capacitor values less than 1 are expressed in μF, and the values more than 1 in pF.
   All capacitors are ceramic 50V, unless otherwise noted as the following marks.
   Electolytic capacitor Mylar capacitor
3. The parts indicated with " ⚠ " have special characteristics, and should be replaced with identical parts only.
4. Voltages read with DIGITAL MULTI-METER from point indicated to chassing ground, using a color bar signal with all controls at normal, line voltage 120 volts.
5. Waveforms are taken receiving color bar signal with enough sensitivity.
6. Voltage reading shown are nominal values and may vary ±20% except H.V.

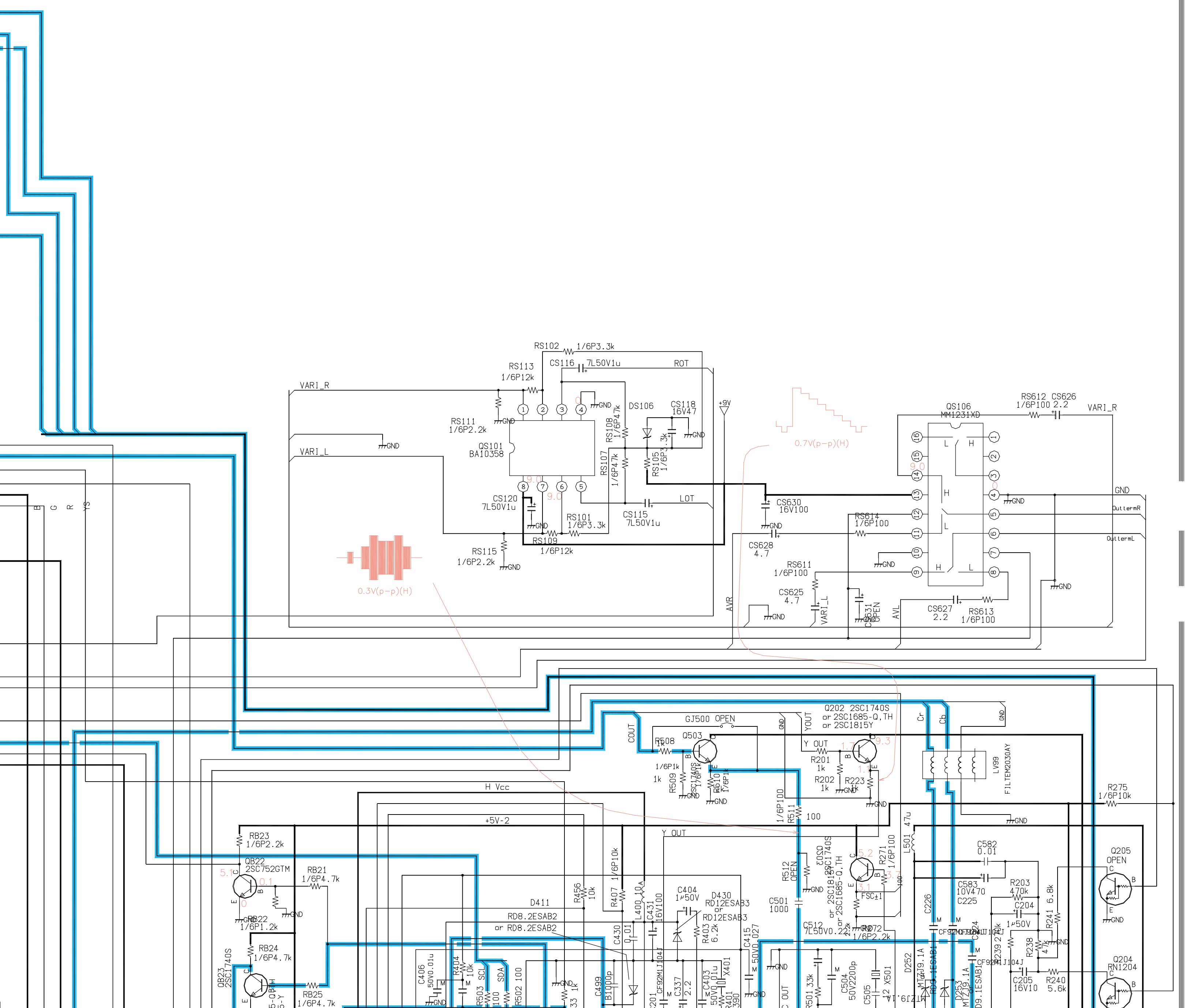


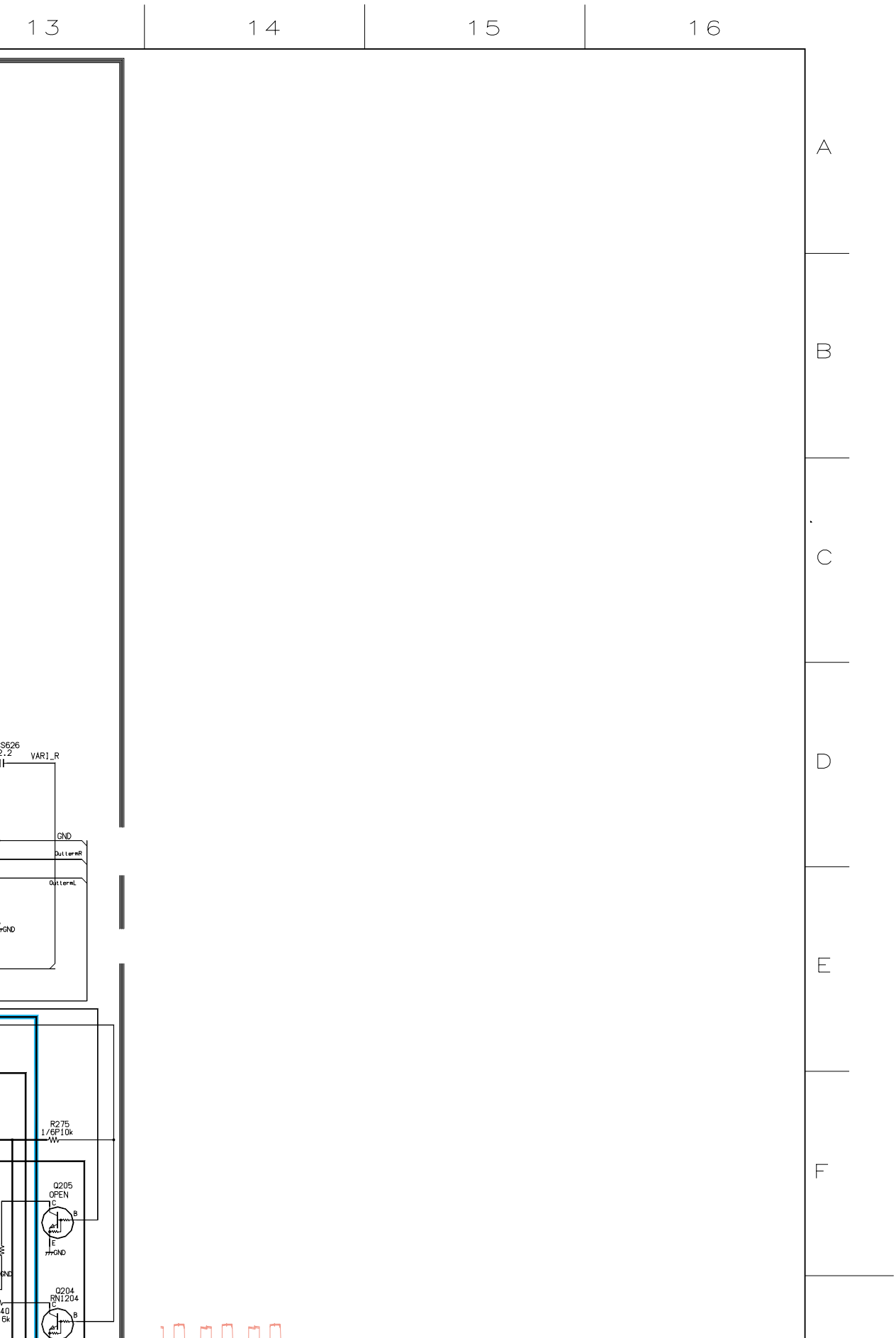

U902 SIGNAL UNIT
QG61 UPC1406HA
Vcc Vol Out IN GND Regu
Q610 TA8265K
QG60 BA10358
Q613 2SC2878-A
Q611 2SC2878-A
D601 D602 D603 D604
H001 EL969L
H003 RSU133X6
IN-1 OUT IN-2
QV02 MM1111XS
LV04 TEM2028AH
QG05 OPEN
QG02 OPEN
IC QG01 UPC1851BCU
P601 SP4P±2.5mm±S±SMK
L_OUT L_GND R_OUT R_GND
L-OUT L-GND R-OUT R-GND
W661 SPK-1360
M603
PA03
A.VCC/A.GND
ROT/LOT/GND
A.MUTE
SBS±PWM
DV01.DV03.DV05.DV13.DV45 or RD9.1ESAB1
or RD10ESAB2
TO HY01
TO PA03
TO AC GAP
SL02
RV45 OPEN

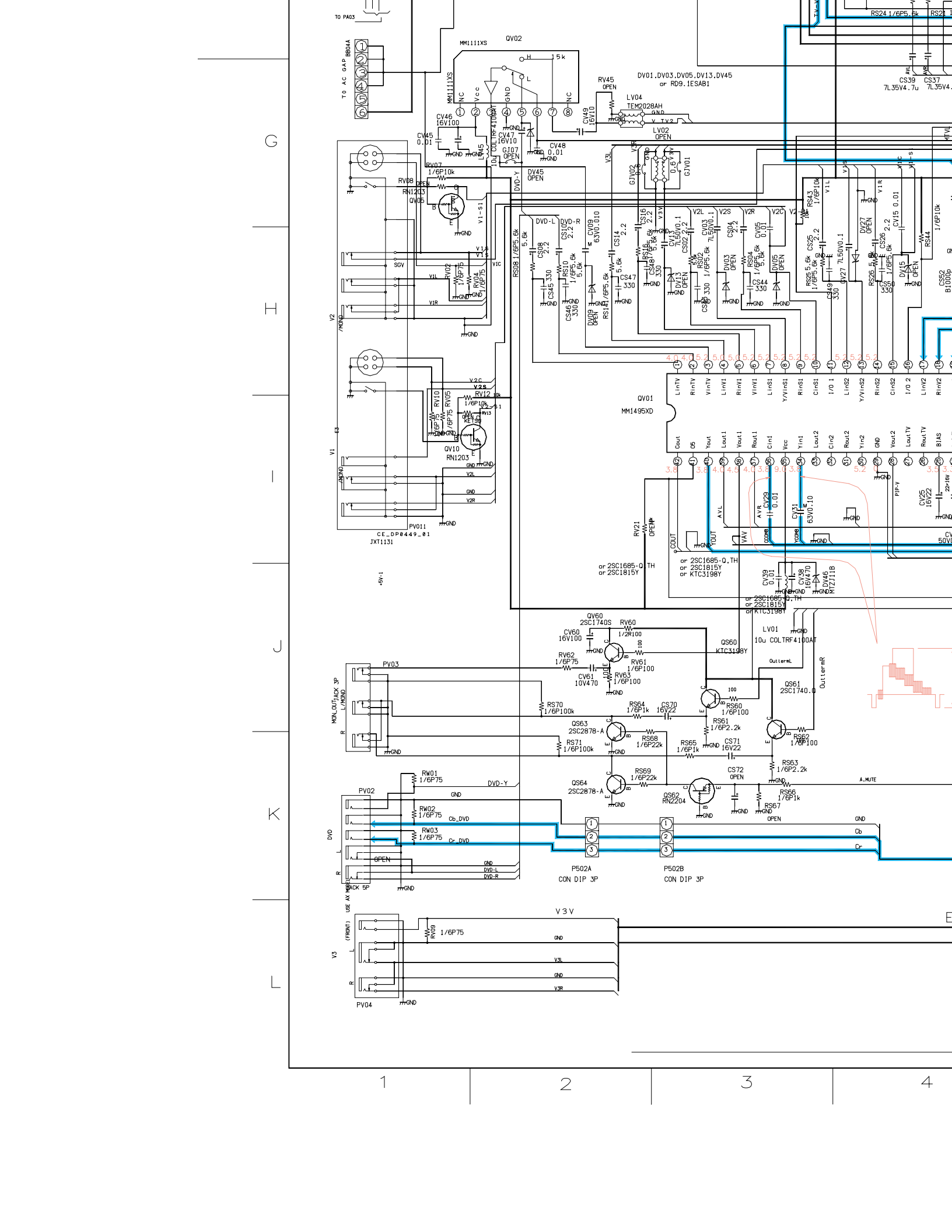

4
5
6
7
8
ZY01
MKMP35
8P 2.5PJ-P T1F
BB03A
AFT2
V-CHIP
SDA
SCL
HD
VD
GND
5V
PIP VIDEO
B OUT
G OUT
R OUT
Vs
SCL
SDA
A.VCC/A.GND
ROT/LOT/GND
A.MUTE
SBS+PWM
Q151
2SA933S
or
2SA564A-Q,TH
or 2SA1015Y
Q152
2SC1740S
or
2SC1685-Q,TH
or 2SC1815Y
+9V
+32V
P1P-TV
P1P V
1.2V
AVL/AVR/GND
Out term L/R
P501A
CON DIP 2P
P501B
CON DIP 2P
FSC_I
NC
Y-COMB
9V
C-COMB
GND
V-AV
5V
FSC
SDA
SCL
10P PLUG
PZ01A
QD80
2SA933S
or 2SA564AQ
or 2SA1015Y
SBS
SBS_PWM
CS39
7L35V4.7u
CS37
7L35V4.7u
RS24 1/6P5.6k
RS21 1/6P5.6k
SDA/SCL
LOT
ROT
DG01
UPC1851BGV-AP-E1
GND
AVL
AVR

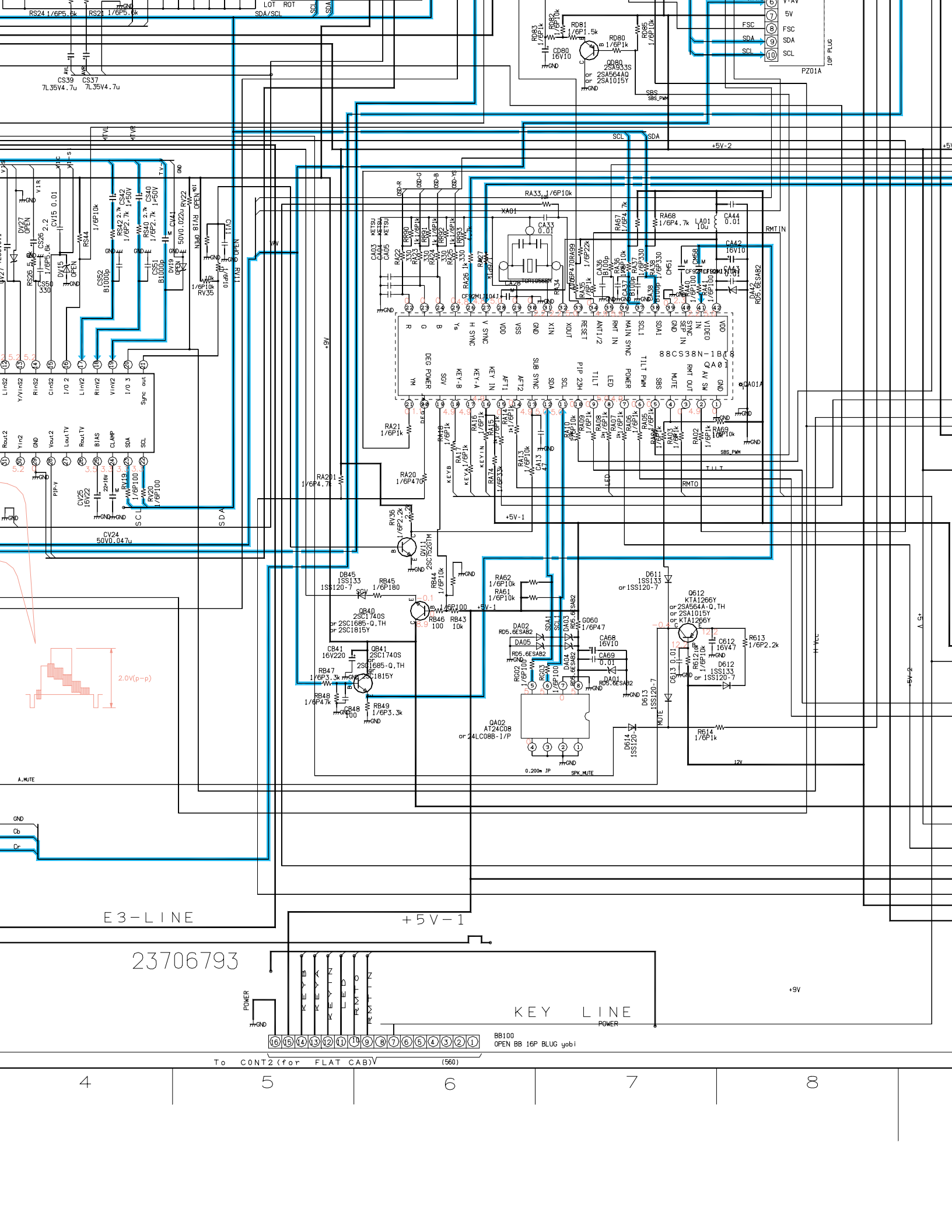
9	10	11	12	13

SIGNAL UNIT

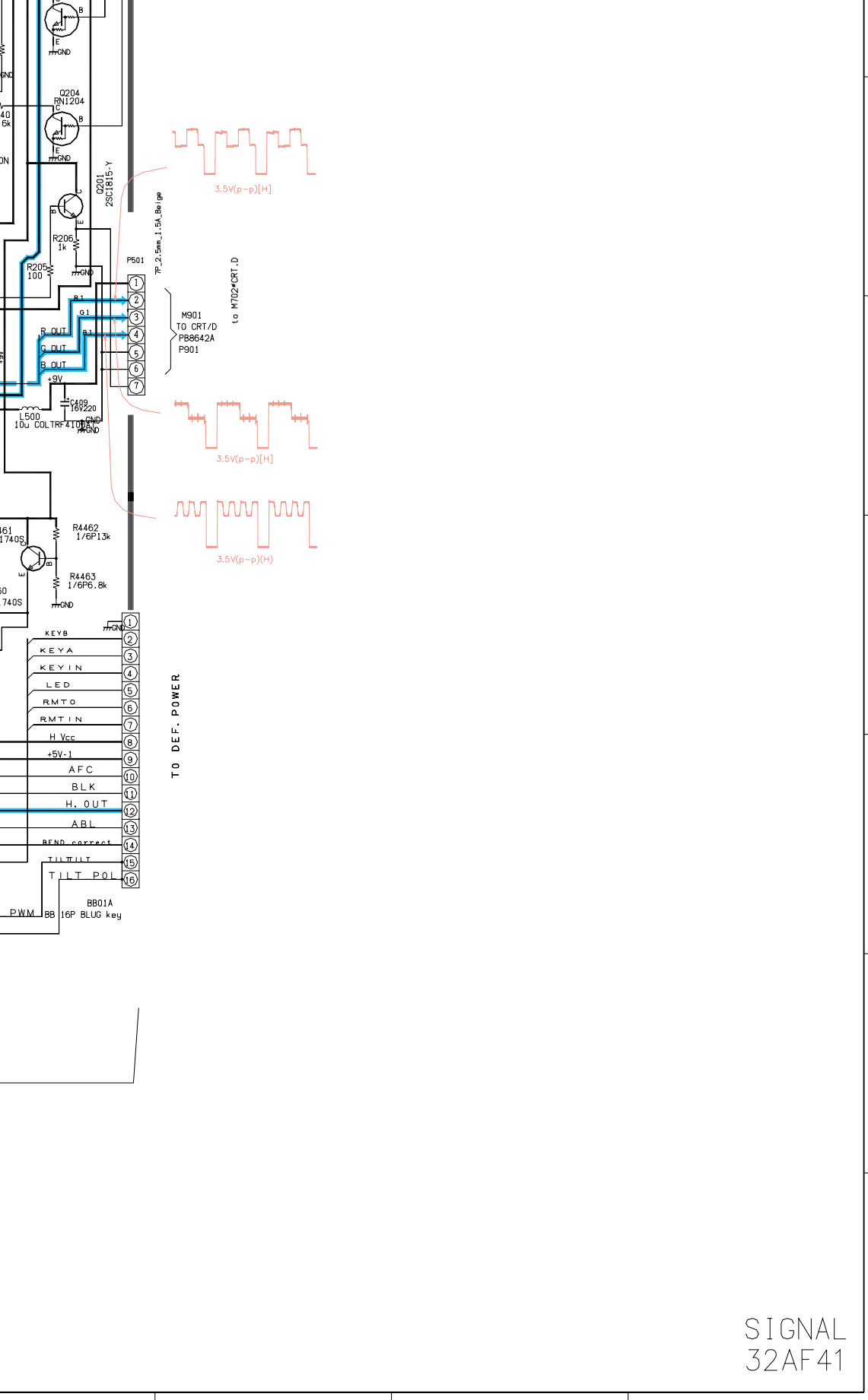



13
14
15
16
A
B
C
D
E
F
VARI_R
GND
OutlermR
OutlermL
R275
1/6P10k
Q205
OPEN
Q204
RN1204


TO PA03
TO AC GAP BBG04A
MM1111XS
QV02
DV01.DV03.DV05.DV13.DV45
or RD9.1ESAB1
LV04
TEM2028AH
LV02
OPEN
DV45
OPEN
RV07
1/6P10k
RV08
OPEN
RN1203
QV05
QV01
MM1495XD
QV10
RN1203
PV011
CE_DP0449_01
JXT1131
QV60
2SC1740S
QS60
KTC3198Y
LV01
10u COLTRF4100AT
QS61
2SC1740.0
QS63
2SC2878-A
QS64
2SC2878-A
QS62
RN2204
PV03
MON_OUT_JACK 3P
PV02
DVD
BACK 5P
P502A
CON DIP 3P
P502B
CON DIP 3P
PV04
V3
V3V
OPEN
A.MUTE
OutlermL
OutlermR
DVD-Y
Cb_DVD
Cr_DVD
DVD-L
DVD-R
Cb
Cr
GND


E3-LINE
+5V-1
23706793
KEY LINE
POWER
KEYB
KEYA
KEYIN
LED
RMTO
RMTIN
+9V
+5V-1
+5V-2
SCL
SDA
88CS38N-1BC8
QA01
QA01A
PZ01A
10P PLUG
SBS_PWM
SPK_MUTE
A.MUTE
TILT
RMTO
RMTIN
BB100
OPEN BB 16P BLUG yobi
To CONT2(for FLAT CAB)V
(560)
2.0V(p-p)
4
5
6
7
8

Q501
TA1310N
Q204
RN1204
Q201
2SC1815-Y
Q823
2SC1740S
Q822
1/6P1.2k
RB24
1/6P4.7k
RB25
1/6P4.7k
or 2SC1685-GR(T)
or 2SC1815-Y
+5V-2
D411
RD8.2ESAB2
or RD8.2ESAB2
D430
RD12ESAB3
or RD12ESAB3
SCL
SDA
dig.GND
GND2
H.D OUT
V.D OUT
FBP IN
H OUT
SYNC OUT
DEF Vcc
SYNC IN
V SEP
AFC 1
32fH VCO
BEND CORRECT
DL-OUT
GND3
CHROMA-IN
APC FILTER
B-Y OUT
R-Y OUT
X'TAL
CW-OUT
VCC(5V)
R/Y-IN
B/Y-IN
Y-IN
BLACK DET.
CHOKKU DEN
EHTY-IN
V.RAMP
V.AGC
V.NFB
V-OUT
EW-OUT
EW/FB
V-SENTER
I/K-IN
B FILTER
G FILTER
R FILTER
Vcc(9V)
B-OUT
G-OUT
R-OUT
VK-OUT
ABL-IN
OSD Ys-IN
OSD B-IN
OSD G-IN
OSD R-IN
Ys/Ym-IN
B-IN
G-IN
R-IN
GND-1
VSM-OUT
P501
R-OUT
G-OUT
B-OUT
+9V
L500
10u COLTRF410K
D224
1SS133
or 1SS120-7
D223
1SS133
or 1SS120-7
D222
1SS133
or 1SS120-7
D221
1SS133
or1SS120-7
D201
1SS133
or 1SS120-7
OSD-B
OSD-G
OSD-R
YM
YS
Q4462
2SC1740S
Q4461
2SC1740S
Q4460
2SC1740S
R4460
1/6P1k
R4461
1/6P1k
R4462
1/6P13k
R4463
1/6P6.8k
R4465
1/6P22k
R4466
1/6P22k
R4467
1/6P22k
R4468
1/6P4.7k
R363
1/6P1M
GJ30
0.6
D314
1SS133
D315
1SS133
Q360
2SC1740S,Q
1.7V(p-p)
5.2V(p-p)
DC=0
1V
R216
1/6P22k
Q361
2SA4721
2SC2655-Y(C)
R368
1/4RF4.7
R369
1/6P390
D316
MTZJ6.8C
or RD6.8ESAB3
or HZS6.8NB3
G317
1SS133
C360
10V220
C361
16V100
KEYB
KEYA
KEYIN
LED
RMTO
RMTIN
H Vcc
AFC
BLK
H. OUT
ABL
BEND correct
TILTIN
TILT POL
TILT PWM
BB 16P BLUG key
BB01A
2.5V(p-p)(v)
2.5V(p-p)(v)
2.5V(p-p)(v)
POWER
RESET
5V-1
DEGpower
+19V
12V
GND
Top bend corr.
Pic. Corr. OUT
EWFB
EWOUT
VOUT
+5V
9V
+9V
BB02A
BB 16P BLUG DEF
TO DEF. POWERr



G

H

I

J

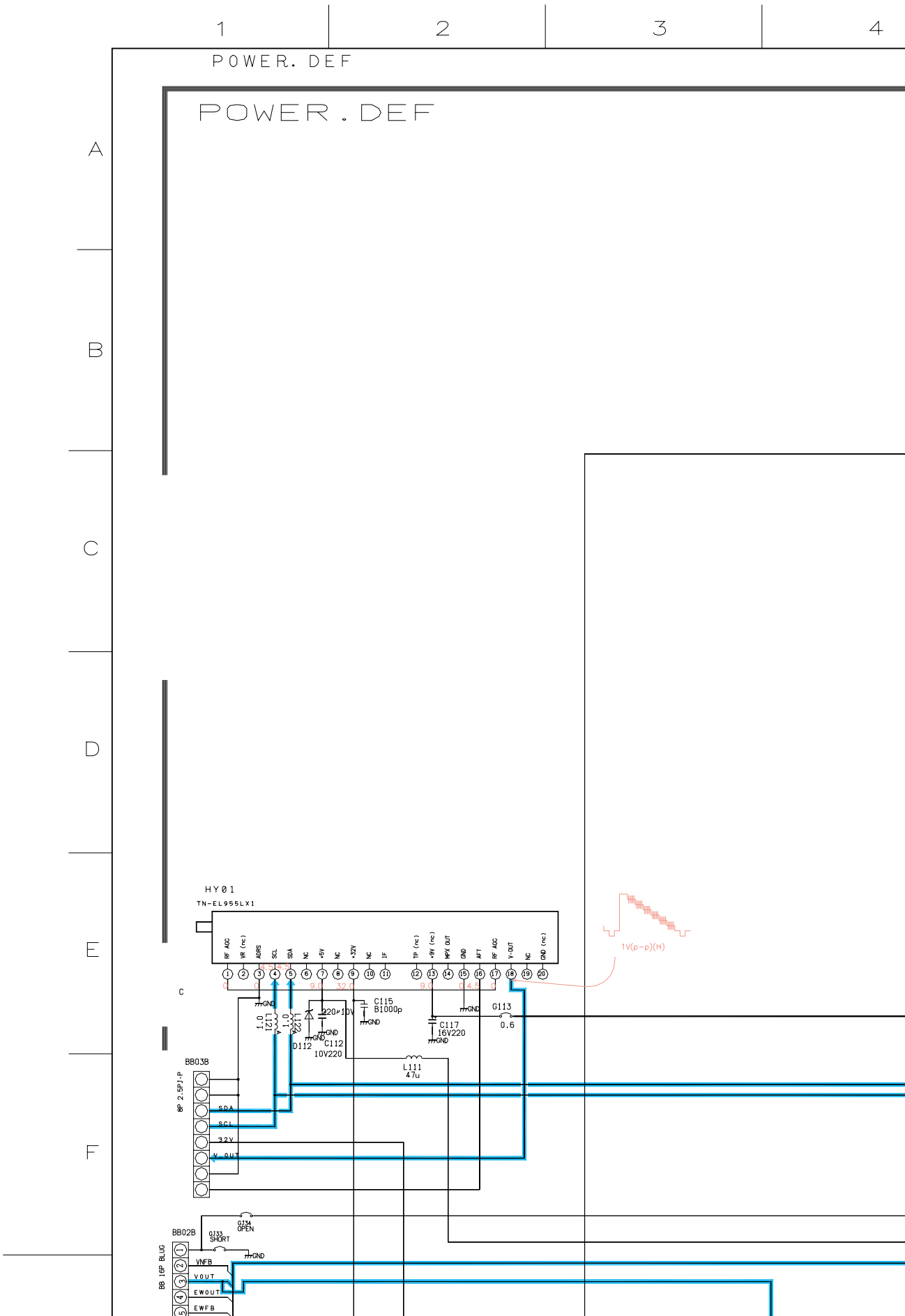
K

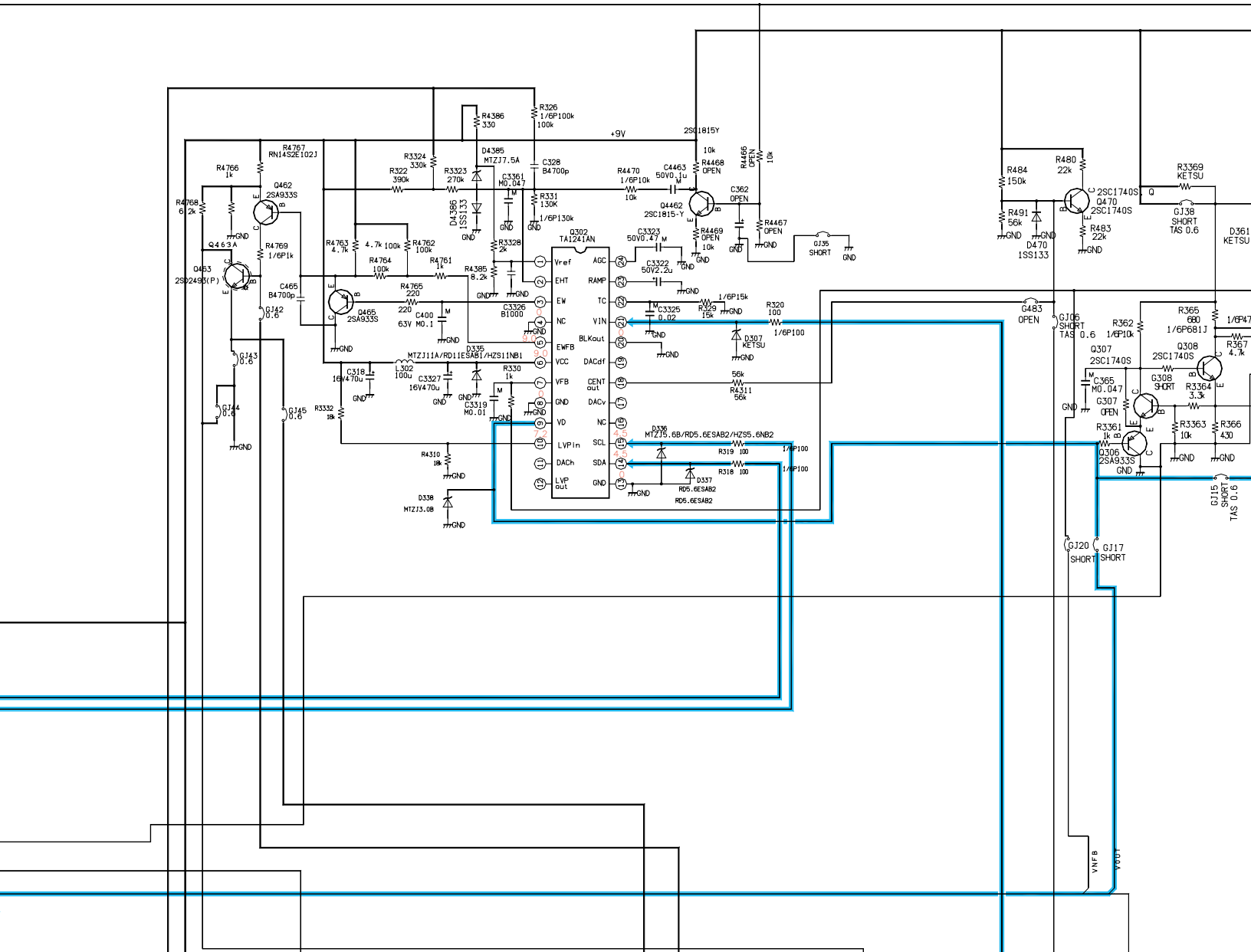
L

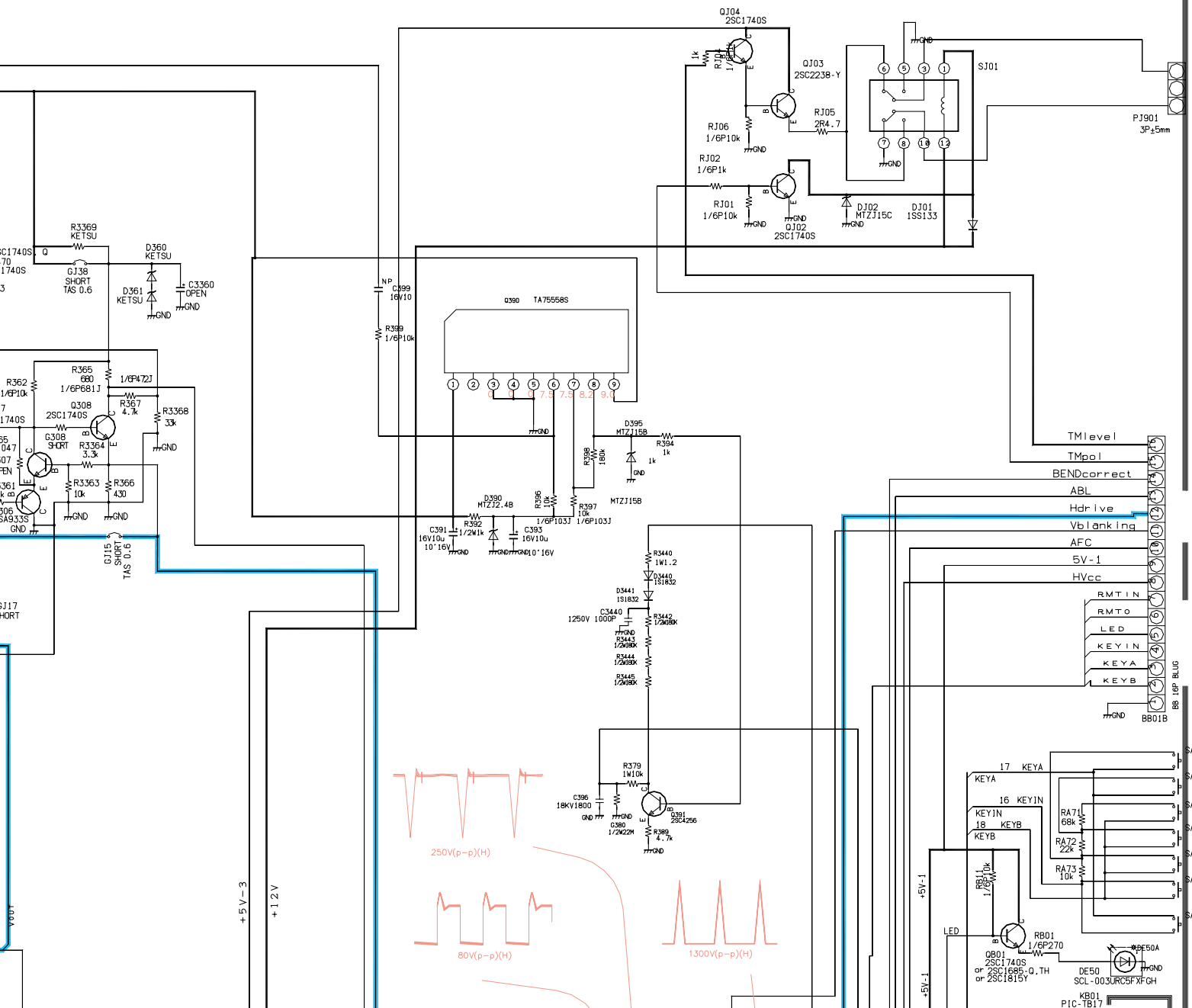
SIGNAL
32AF41

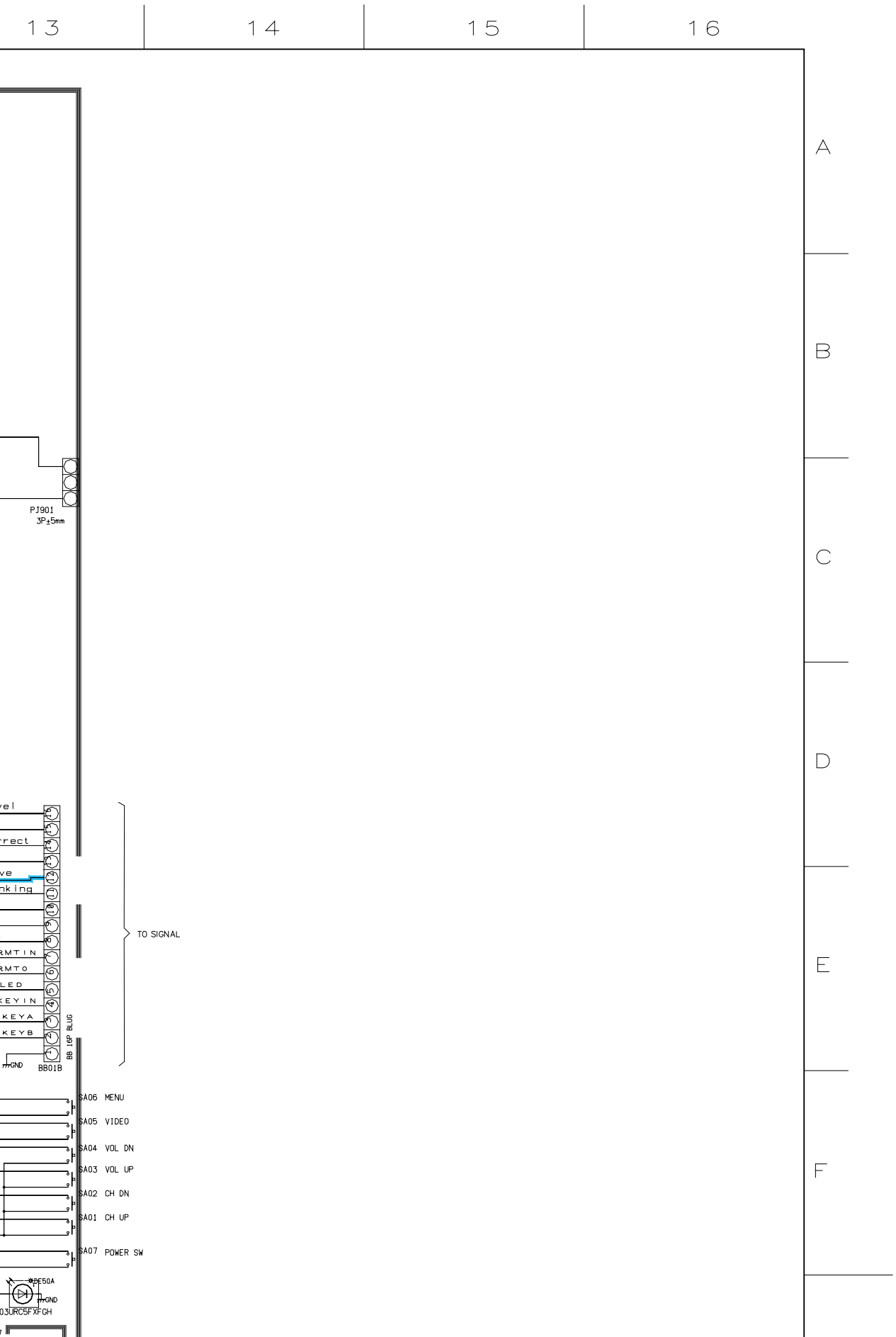
13 14 15 16

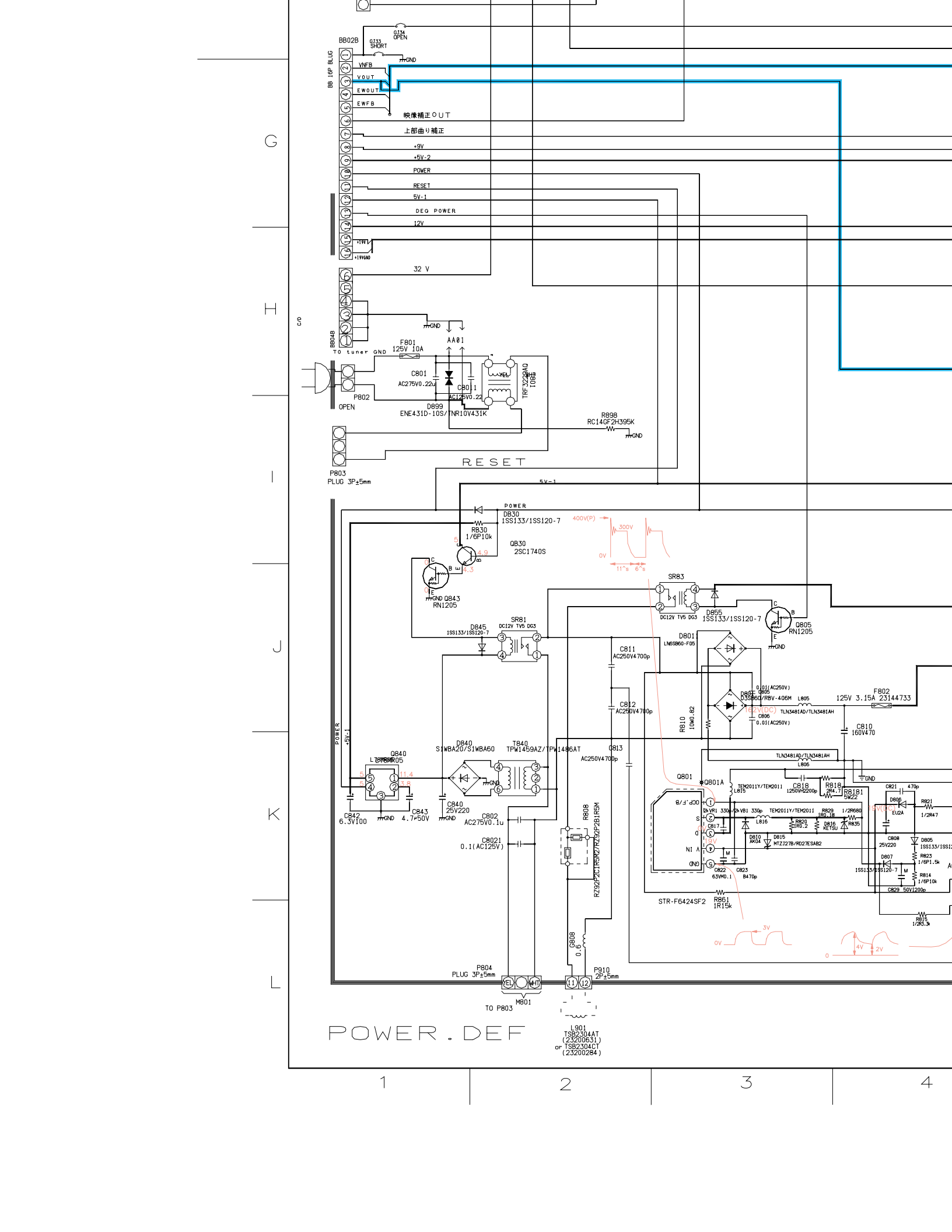
POWER.DEF

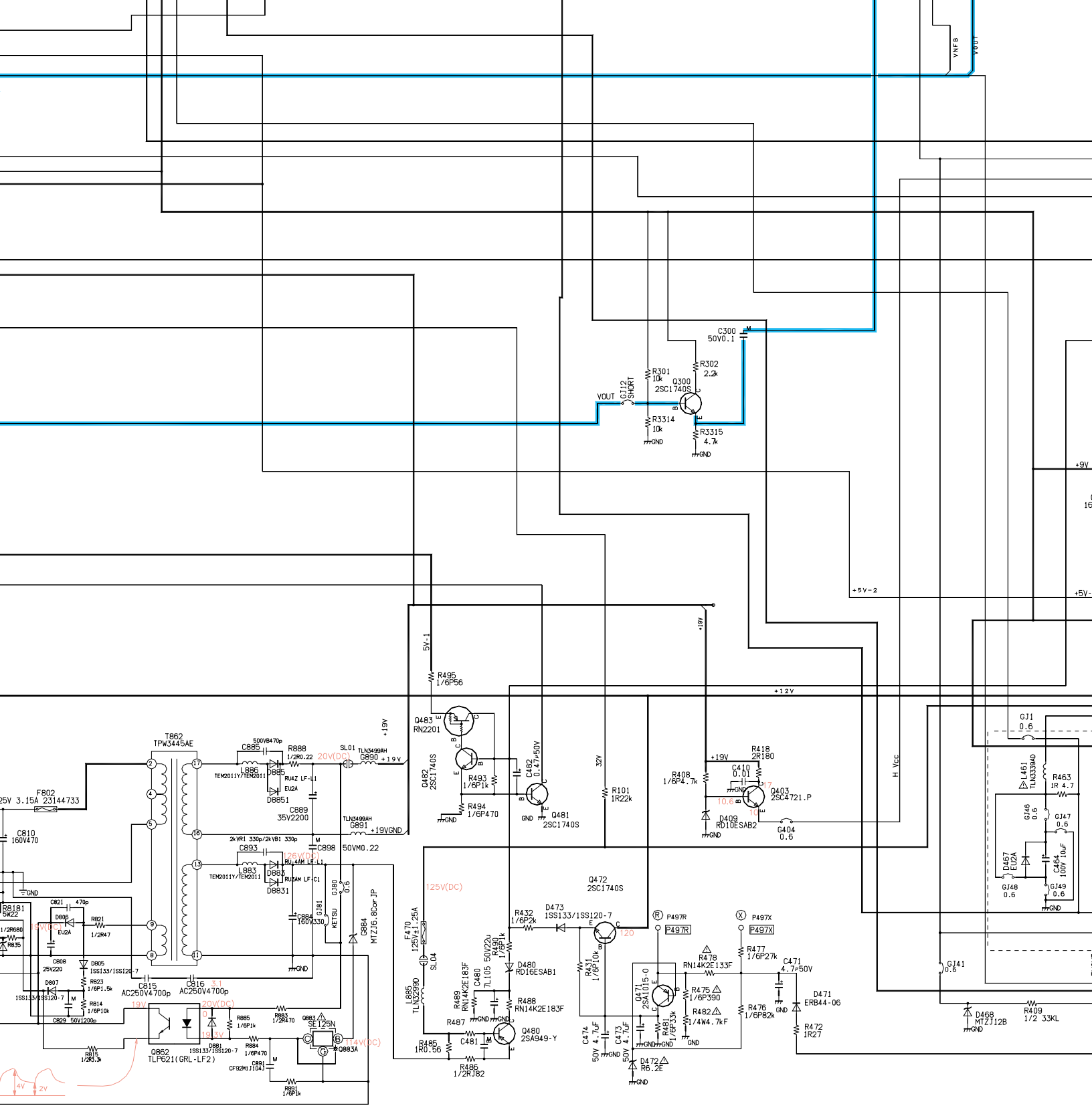

1
2
3
4
A
B
C
D
E
F
POWER . DEF
HY01
TN-EL956LX1
RF AGC
VR (nc)
ADRS
SCL
SDA
NC
+5V
NC
-32V
NC
IF
TP (nc)
+9V (nc)
MPX OUT
GND
AFT
RF AGC
V-OUT
NC
GND (nc)
1V(p-p)(H)
C115
B1000p
220μ10V
C112
10V220
D112
L121
1.0
L211
1.0
C117
16V220
G113
0.6
L111
47u
BB03B
8P 2.5PJ-P
SDA
SCL
32V
V_OUT
BB02B
BB 16P PLUG
G134
OPEN
G133
SHORT
VNFB
VOUT
EWOUT
EWFB

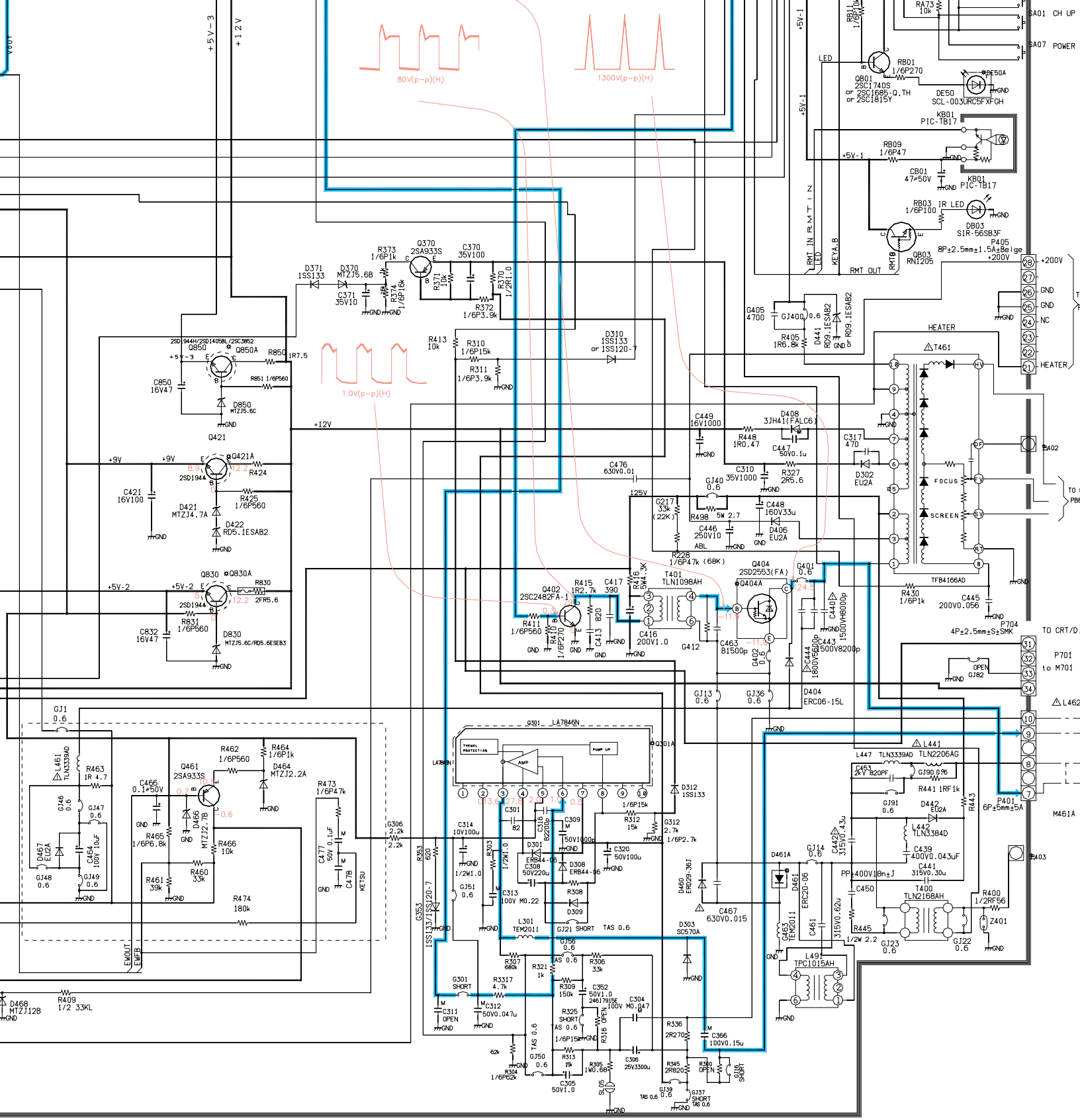

+9V
Q302
TA1241AN
Vref
EHT
EW
NC
EWFB
VCC
VFB
GND
VD
LVPin
DACh
LVP out
AGC
RAMP
TC
VIN
BLKout
DACdf
CENT out
DACv
NC
SCL
SDA
GND
VNFB
VOUT

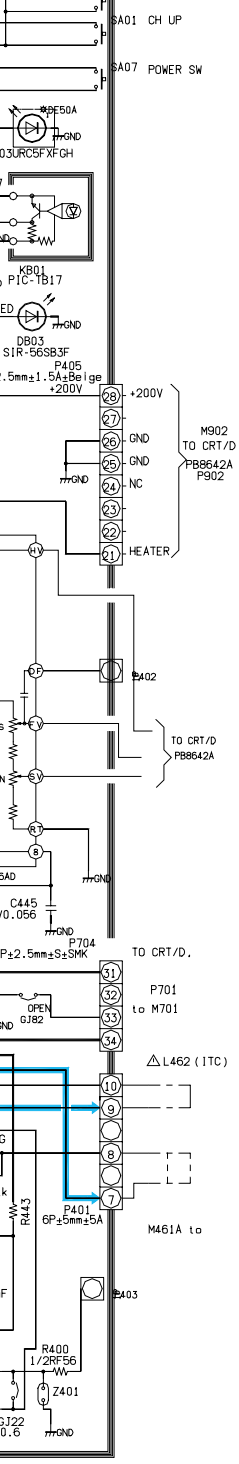

QJ04
2SC1740S
QJ03
2SC2238-Y
SJ01
PJ901
3P±5mm
RJ06
1/6P10k
RJ05
2R4.7
RJ02
1/6P1k
RJ01
1/6P10k
QJ02
2SC1740S
DJ02
MTZJ15C
DJ01
1SS133
R3369
KETSU
D360
KETSU
D361
KETSU
C3360
OPEN
GJ38
SHORT
TAS 0.6
C399
16V10
R399
1/6P10k
Q390
TA75558S
R365
680
1/6P681J
R367
4.7k
Q308
2SC1740S
R3368
33k
R362
1/6P10k
R3364
3.3k
R3363
10k
R366
430
Q308
SHORT
D390
MTZJ2.4B
R396
10k
R397
10k
1/6P103J
D395
MTZJ15B
R394
1k
R398
180k
MTZJ15B
C391
16V10u
10*16V
R392
1/2W1k
C393
16V10u
10*16V
GJ15
SHORT
TAS 0.6
R3440
1W1.2
D3440
1S1832
D3441
1S1832
C3440
1250V 1000P
R3442
1/2W68K
R3443
1/2W68K
R3444
1/2W68K
R3445
1/2W68K
R379
1W10k
C396
18KV1800
G380
1/2W22M
D391
2SC4256
R389
4.7k
250V(p-p)(H)
80V(p-p)(H)
1300V(p-p)(H)
+5V-3
+12V
TMlevel
TMpol
BENDcorrect
ABL
Hdrive
Vblanking
AFC
5V-1
HVcc
RMTIN
RMTo
LED
KEYIN
KEYA
KEYB
BB01B
BB 16P BLUG
SA06 MENU
SA05 VIDEO
SA04 VOL DN
SA03 VOL UP
SA02 CH DN
SA01 CH UP
SA07 POWER
17 KEYA
KEYA
16 KEYIN
KEYIN
18 KEYB
KEYB
RA71
68k
RA72
22k
RA73
10k
RB11
1/6P10k
+5V-1
LED
RB01
1/6P270
QB01
2SC1740S
or 2SC1685-Q,TH
or 2SC1815Y
DE50
SCL-003URC5FXFGH
KB01
PIC-TB17


13
14
15
16
A
B
C
D
E
F
PJ901
3P±5mm
TO SIGNAL
BB 16P BLUG
BB01B
GND
SA06 MENU
SA05 VIDEO
SA04 VOL DN
SA03 VOL UP
SA02 CH DN
SA01 CH UP
SA07 POWER SW
GND


BB02B
BB 16P BLUG
VNFB
VOUT
EWOUT
EWFB
映像補正ＯＵＴ
上部曲り補正
+9V
+5V-2
POWER
RESET
5V-1
DEG POWER
12V
32 V
BB04B
TO tuner GND
F801
125V 10A
AA01
C801
AC275V0.22u
C8011
AC125V0.22
D899
ENE431D-10S/TNR10V431K
P802
OPEN
R898
RC14GF2H395K
P803
PLUG 3P±5mm
RESET
POWER
DB30
1SS133/1SS120-7
R830
1/6P10k
QB30
2SC1740S
SR83
DC12V TV5 DG3
D855
1SS133/1SS120-7
Q805
RN1205
SR81
D845
1SS133/1SS120-7
D801
LN6SB60-F05
C811
AC250V4700p
C812
AC250V4700p
R810
10W0.82
F802
125V 3.15A 23144733
C810
160V470
C813
AC250V4700p
Q840
L6384R05
D840
S1WBA20/S1WBA60
T840
TPW1459AZ/TPW1486AT
C842
6.3V100
C843
4.7*50V
C840
25V220
C802
AC275V0.1u
C8021
0.1(AC125V)
R808
RZ92P2C1R5M27/RZ92P2B1R5M
C808
0.68
Q801
*Q801A
TEM2011Y/TEM2011
R818
2R4.7
R8181
SW22
C818
1250V2200p
C821
470p
D806
EU2A
R821
1/2R47
D805
1SS133/1SS120-7
R823
1/6P1.5k
R814
1/6P10k
C829
50V1200p
R815
1/2R3.3k
STR-F6424SF2
R861
1R15k
P804
PLUG 3P±5mm
M801
TO P803
P910
2P±5mm
L901
TSB2304AT
(23200631)
or TSB2304CT
(23200284)
POWER . DEF


VOUT
VNFB
C300 50V0.1
R301 10k
R302 2.2k
Q300 2SC1740S
GJ12 SHORT
R3314 10k
R3315 4.7k
GND
+9V
+5V-2
+5V-
5V-1
+19V
+12V
R495 1/6P56
Q483 RN2201
Q482 2SC1740S
R493 1/6P1k
R494 1/6P470
C482 0.47 50V
Q481 2SC1740S
R101 1R22k
32V
H Vcc
R408 1/6P4.7k
C410 0.01
Q403 2SC4721.P
D409 RD10ESAB2
R418 2R180
G404 0.6
GJ1 0.6
L461 TLN3339AD
R463 1R 4.7
GJ46 0.6
GJ47 0.6
D467 EU2A
C464 100V 10uF
GJ48 0.6
GJ49 0.6
GJ41 0.6
D468 MTZJ12B
R409 1/2 33KL
T862 TPW3445AE
F802 25V 3.15A 23144733
C810 160V470
C885 500VB470p
L886 TEM2011Y/TEM2011
D885 RU4Z LF-L1
EU2A
D8851
C889 35V2200
R888 1/2R0.22
SL01 TLN3499AH
G890 +19V
TLN3499AH G891 +19VGND
C898 50VM0.22
C893 2kVR1 330p/2kVB1 330p
L883 TEM2011Y/TEM2011
D883 RU3AM LF-C1
D8831
C884 160V330
GJ81
KETSU
GJ80 0.6
D884 MTZJ6.8Cor JP
125V(DC)
Q472 2SC1740S
F470 125V+1.25A
SL04
L885 TLN3299D
R432 1/6P2k
D473 1SS133/1SS120-7
R431 1/6P10k
120
P497R
P497X
R477 1/6P27k
R478 RN14K2E133F
C471 4.7 50V
R475 1/6P390
R482 1/4W4.7kF
R476 1/6P82k
D471 ERB44-06
R472 1R27
Q471 2SJ615-O
R483 1/6P33k
C474 4.7uF 50V
C473 4.7uF 50V
D472 R6.2E
R487
R489 RN14K2E183F
C480 7L105
R488 RN14K2E183F
D480 RD16ESAB1
50V22u R490 1/6P1k
Q480 2SA949-Y
C481
R485 1R0.56
R486 1/2RJ82
R8181 5W22
C821 470p
D806 EU2A
R821 1/2R47
C808 25V220
D805 1SS133/1SS120-7
D807
R823 1/6P1.5k
R814 1/6P10k
C829 50V1200p
C815 AC250V4700p
C816 AC250V4700p
3.1
19V
20V(DC)
R885 1/6P1k
R883 1/2R470
Q883 SPT125N
Q883A
R884 1/6P470
D881 1SS133/1SS120-7
Q862 TLP621(GRL-LF2)
R815 1/2R3.3k
C891 CF92M1J104J
R891 1/6P1k
4V
2V
14V(DC)
19.35V


+5V-3
+12V
80V(p-p)(H)
1300V(p-p)(H)
1.0V(p-p)(H)
+5V-1
LED
RB01 1/6P270
QB01 2SC1740S or 2SC1685-Q,TH or 2SC1815Y
DE50 SCL-003URC5FXFGH
KB01 PIC-TB17
RB09 1/6P47
CB01 47/50V
RB03 IR LED 1/6P100
DB03 SIR-56SB3F
QB03 RN1205
RMT IN
RMT OUT
KEY A,B
P405 8P±2.5mm±1.5A±Beige
+200V
HEATER
T461
FOCUS
SCREEN
P402
P704 4P±2.5mm±S±SMK
TO CRT/D
P701 to M701
Q850 2SD1944H/2SD1405BL/2SC3852
Q421 2SD1944
Q830 2SD1944
D850 MTZJ5.6C
D830 MTZJ5.6C/RD5.6ESEB3
D421 MTZJ4.7A
D422 RD5.1ESAB2
+9V
+5V-2
C850 16V47
C832 16V47
C421 16V100
R850 1R7.5
R851 1/6P560
R424
R425 1/6P560
R830 2FR5.6
R831 1/6P560
+12V
Q370 2SA933S
D370 MTZJ5.6B
D371 1SS133
D310 1SS133 or 1SS120-7
R310 1/6P15k
R311 1/6P3.9k
R413 10k
R372 1/6P3.9k
R373 1/6P1k
R374 1/6P16k
C370 35V100
C371 35V10
R370 1/2R1.0
C476 630V0.01
125V
G217 33k (22K)
R498 5W 2.7
C446 250V10 ABL
R228 1/6P47k (68K)
Q402 2SC2482FA-1
R411 1/6P560
R410 1/6P270
R415 1R2.7k
C417 390
C413 820
R416 5W4.3K
T401 TLN1098AH
C416 200V1.0
G412
Q404 2SD2553(FA)
C463 B1500p
G402 0.6
C440 1500V8000p
C443 1500V8200p
C444 1500V8000p
G401 0.6
R430 1/6P1k
C445 200V0.056
TFB4166AD
C449 16V1000
D408 3JH41(FALC6)
R448 1R0.47
C447 50V0.1u
C310 35V1000
R327 2R5.6
C448 160V33u
D406 EU2A
C317 470
D302 EU2A
G405 4700
GJ400 0.6
R405 1R6.8k
D441 RD9.1ESAB2
R409 1R0.47
D404 ERC06-15L
GJ13 0.6
GJ36 0.6
GJ82
Q301 LA7846N
THERMAL PROTECTION
AMP
PUMP UP
Q301A
D312 1SS133
R312 15k
G312 2.7k
C301 82
C316 B2200p
C309 M 50V1000p
C320 50V100u
C314 10V100u
R303 1/2W1.0
D301 ERB44-06
C308 50V220u
D308 ERB44-06
R308
D309
C313 100V M0.22
L301 TEM2011
GJ21 SHORT
TAS 0.6
GJ58 0.6
R307 680k
R321 1k
R306 33k
R309 150k
C352 50V1.0
C304 M0.047
R325 SHORT
R316 OPEN
R313 1k
C306 25V3300u
C305 50V1.0
R304 1/6P62k
62k
GJ50 0.6
G301 SHORT
R3317 4.7k
C312 50V0.047u
C311 OPEN
R336 2R270
C366 100V0.15u
R345 2R820
R340 OPEN
GJ16 SHORT
GJ39 0.6
GJ37 SHORT
D303 SC570A
D460 ERD29-36J
C467 630V0.015
L441 TLN2206AG
L447 TLN3339AD
C453 2KV 820PF
GJ90 0.96
R441 1RF1k
R443
GJ91 0.6
D442 EU2A
L442 TLN3384D
C439 400V0.043uF
C441 315V0.30u
C442 315V0.43u
PP1 400V18n±J
C450
T400 TLN2168AH
R400 1/2RF56
Z401
R445 1/2W 2.2
GJ23 0.6
GJ22 0.6
L491 TPC1015AH
D461 ERC20-06
D461A
GJ14 0.6
G463 TEM2011
C461 315V0.62u
P403
P401 6P±5mm±5A
M461A
L461 TLN3339AD
R463 1R 4.7
GJ46 0.6
GJ47 0.6
GJ48 0.6
GJ49 0.6
D467 EU2A
C464 100V 10uF
Q461 2SA933S
R462 1/6P560
R464 1/6P1k
D464 MTZJ2.2A
C466 0.1u50V
D466 MTZJ2.7B
R465 1/6P6.8k
R466 10k
R460 33k
R461 39k
R473 1/6P47k
R474 180k
C477 50V 0.1uF
C478 KETSU
GJ1 0.6
G306 2.2k 2.2k
R353 620
1SS133/1SS120-7
G353
LWOUT
LWFB
D468 MTZJ12B
R409 1/2 33KL
SA01 CH UP
SA07 POWER

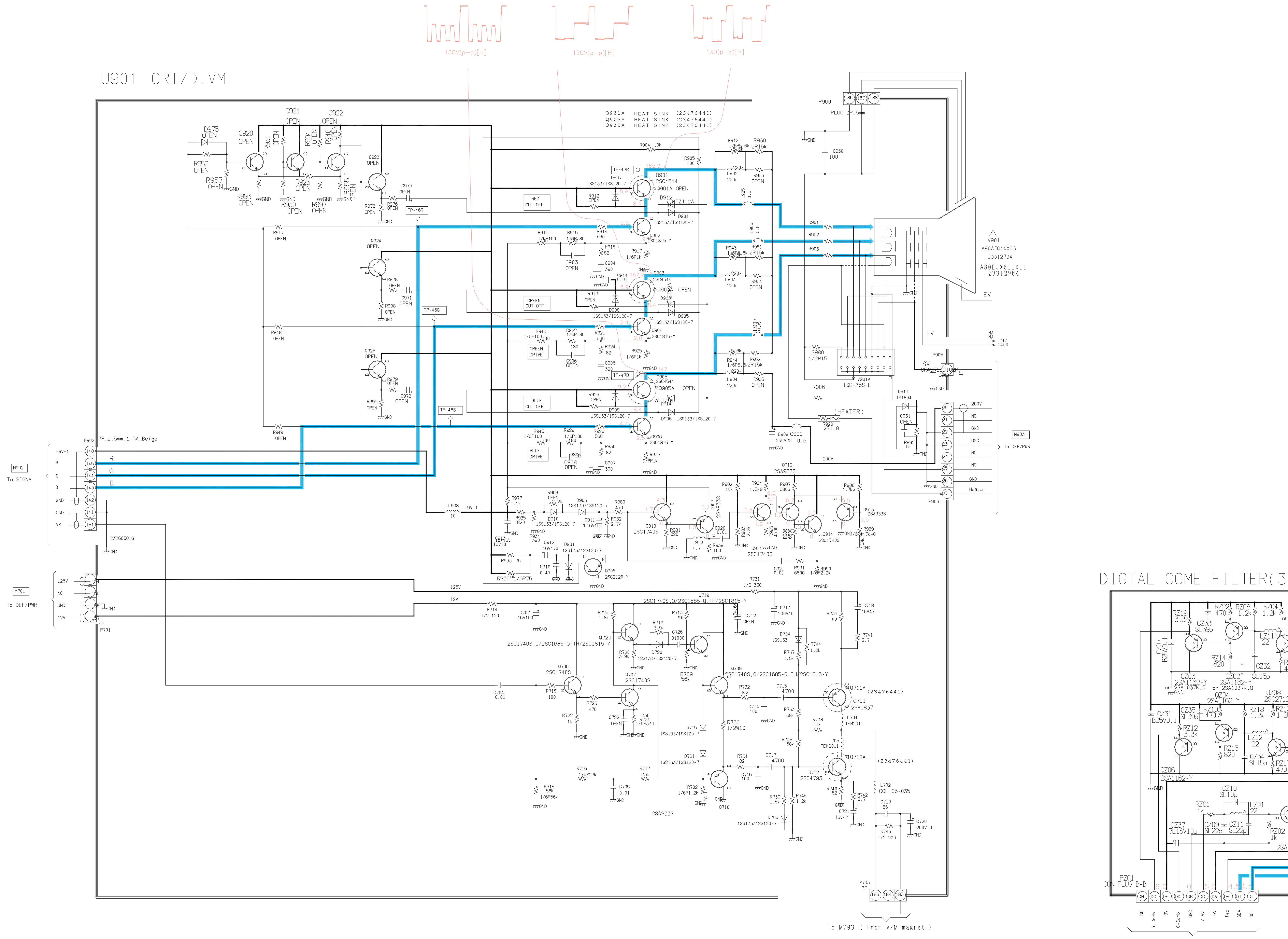


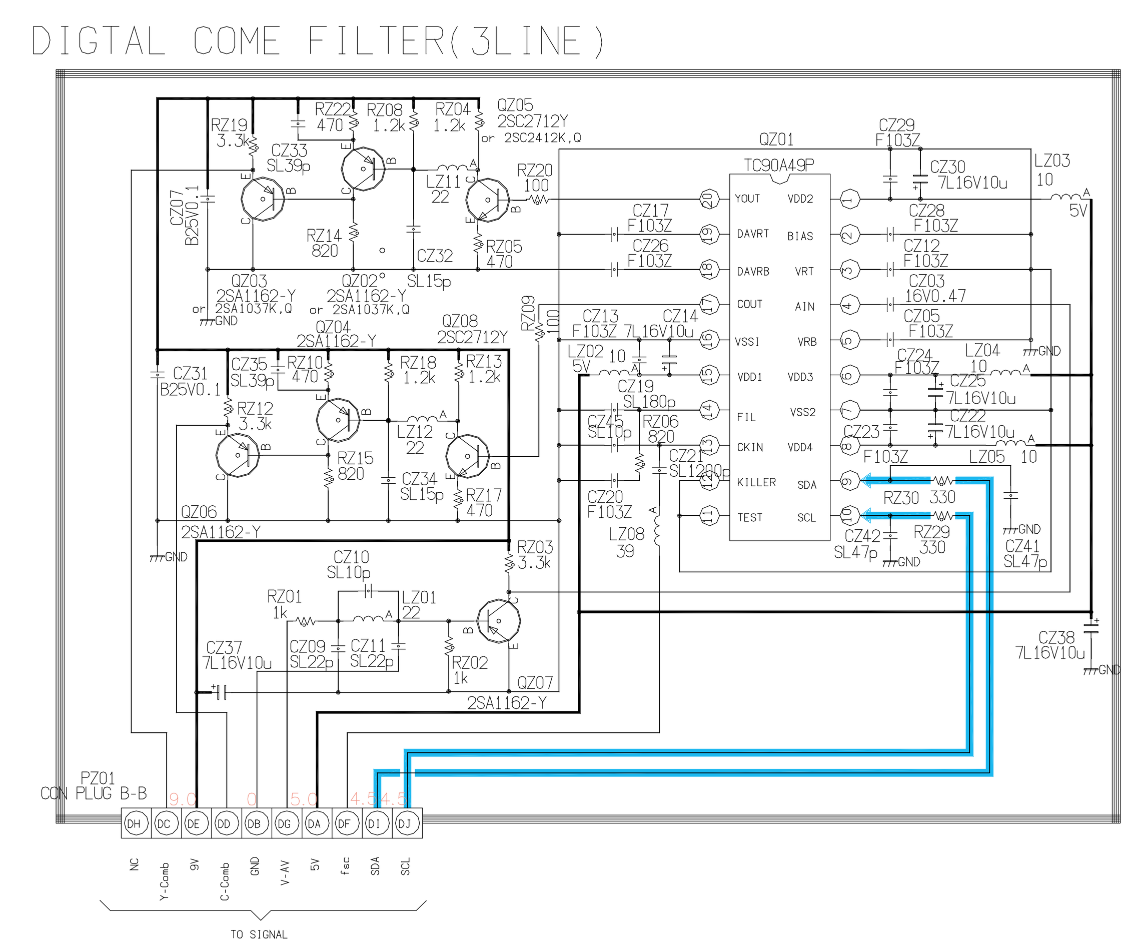
POWER . DEF

32AF41

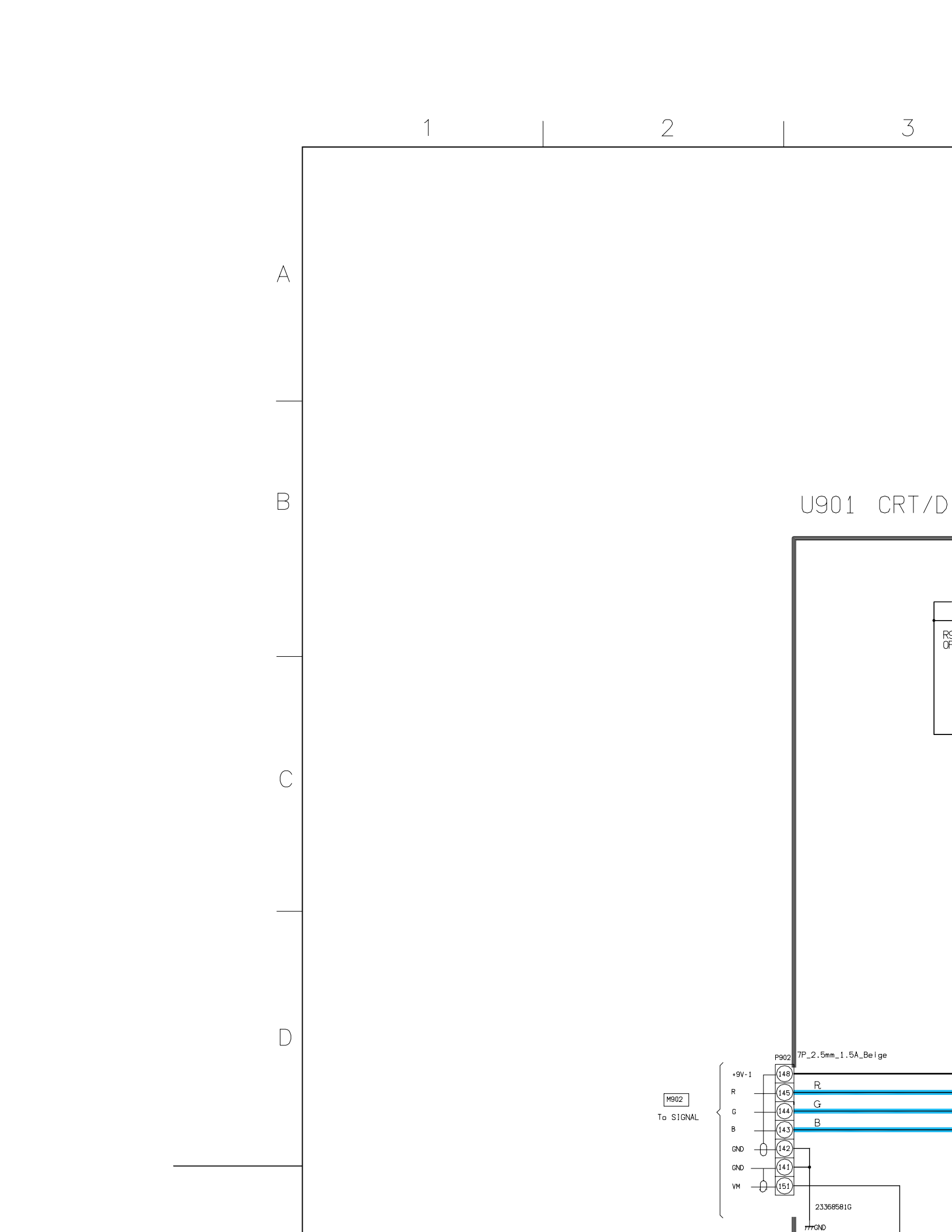
G H I J K L

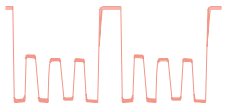
13 14 15 16

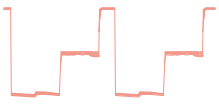

U901 CRT/D.VM
130V(p-p)[H]
120V(p-p)[H]
130(p-p)[H]
Q901A HEAT SINK (23476441)
Q903A HEAT SINK (23476441)
Q905A HEAT SINK (23476441)
P900
PLUG 3P_5mm
V901
A90AJQ14X06
23312734
A80EJX011X11
23312904
EV
FV
RED CUT OFF
GREEN CUT OFF
BLUE CUT OFF
GREEN DRIVE
BLUE DRIVE
TP-47R
TP-47B
TP-46R
TP-46G
TP-46B
Q901 2SC4544
Q903 2SC4544
Q905 2SC4544
Q902 2SC1815-Y
Q904 2SC1815-Y
Q906 2SC1815-Y
Q912 2SA933S
Q913 2SA933S
Q907 2SA933S
Q910 2SC1740S
Q911 2SC1740S
Q914 2SC1740S
Q908 2SC2120-Y
V901A ISD-35S-E
(HEATER)
200V
P902 7P_2.5mm_1.5A_Beige
M902
To SIGNAL
+9V-1
R
G
B
GND
GND
VM
23368581G
M701
To DEF/PWR
125V
NC
GND
12V
4P P701
M903
To DEF/PWR
200V
NC
GND
GND
NC
NC
GND
Heater
P903
Q719 2SC1740S,Q/2SC1685-Q,TH/2SC1815-Y
Q720 2SC1740S,Q/2SC1685-Q-TH/2SC1815-Y
Q709 2SC1740S,Q/2SC1685-Q,TH/2SC1815-Y
Q706 2SC1740S
Q707 2SC1740S
Q710 2SA933S
Q711A (23476441)
Q711 2SA1837
Q712A (23476441)
Q712 2SC4793
L702 COLHC5-035
P703 3P
To M703 (From V/M magnet)

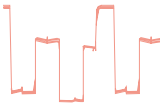

DIGTAL COME FILTER(3LINE)
QZ01
TC90A49P
YOUT
DAVRT
DAVRB
COUT
VSS1
VDD1
FIL
CKIN
KILLER
TEST
VDD2
BIAS
VRT
AIN
VRB
VDD3
VSS2
VDD4
SDA
SCL
QZ05 2SC2712Y or 2SC2412K,Q
QZ03 2SA1162-Y or 2SA1037K,Q
QZ02 2SA1162-Y or 2SA1037K,Q
QZ04 2SA1162-Y
QZ08 2SC2712Y
QZ06 2SA1162-Y
QZ07 2SA1162-Y
PZ01
CON PLUG B-B
NC
Y-Comb
9V
C-Comb
GND
V-AV
5V
fsc
SDA
SCL
TO SIGNAL

3L DIGI-COMB
CRT-D VM
32AF41

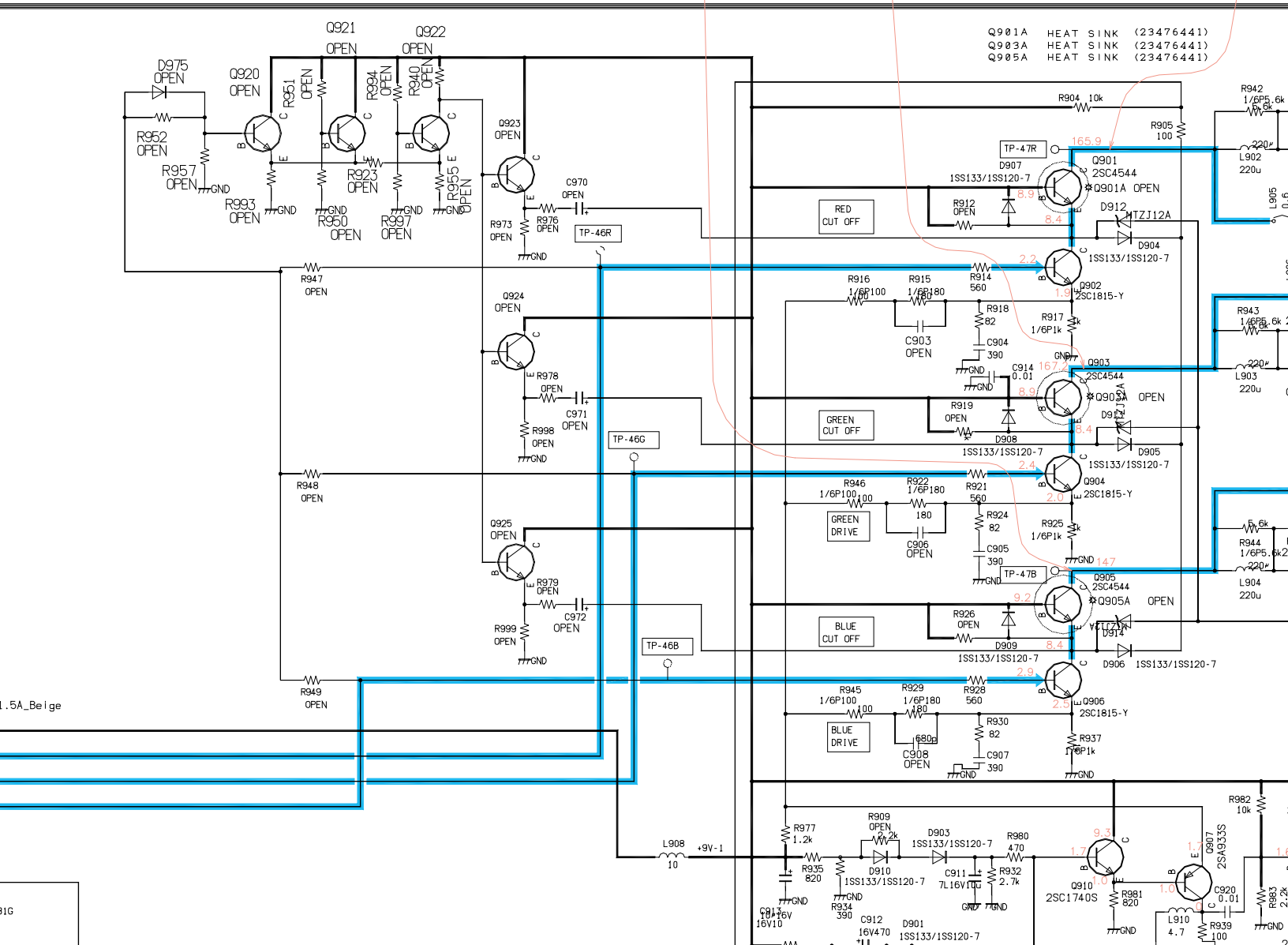

1
2
3
A
B
C
D
U901 CRT/D
P902
7P_2.5mm_1.5A_Beige
+9V-1
R
G
B
GND
GND
VM
148
145
144
143
142
141
151
M902
To SIGNAL
R
G
B
23368581G
GND

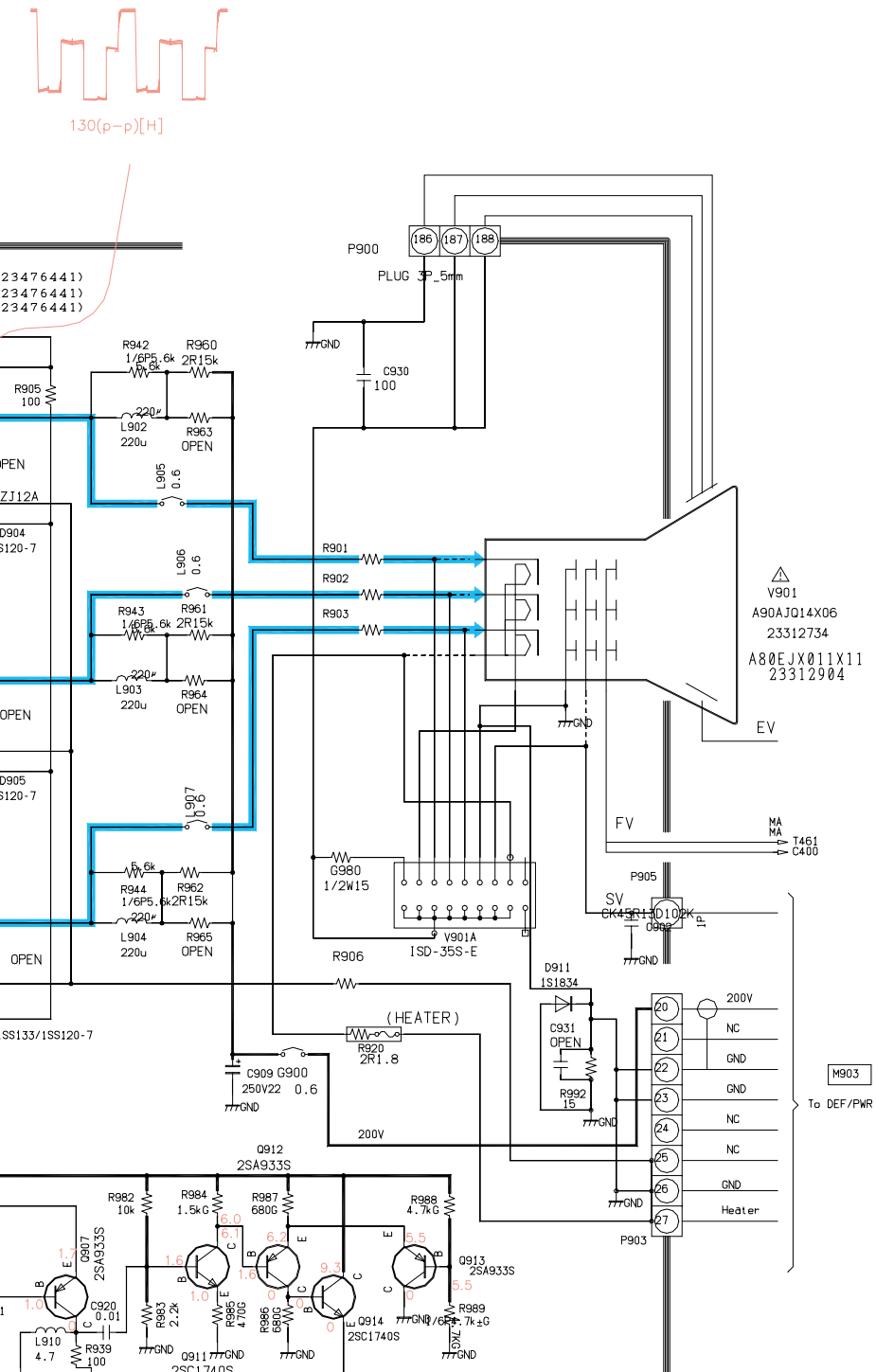

130V(p-p)[H]

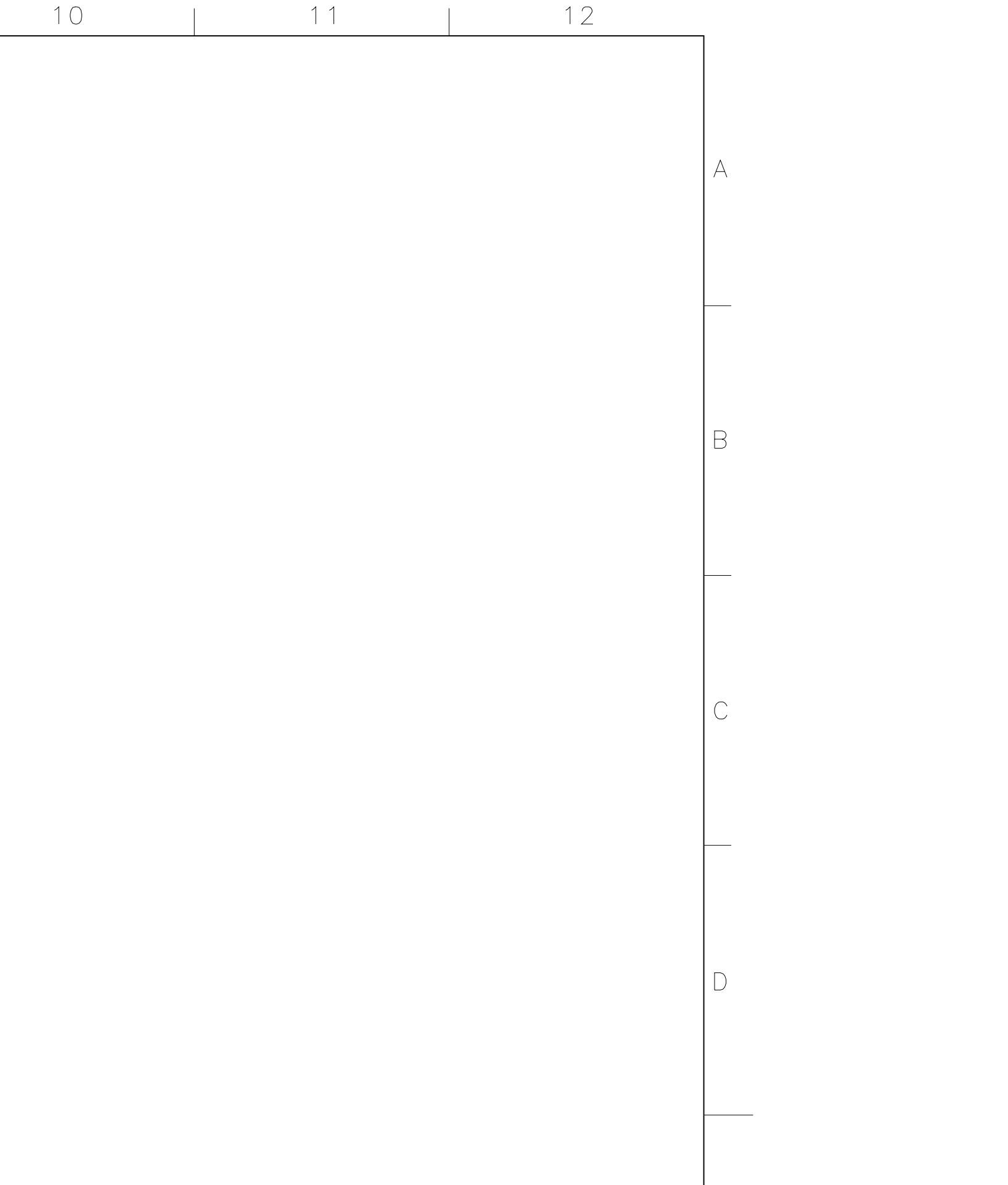

120V(p-p)[H]

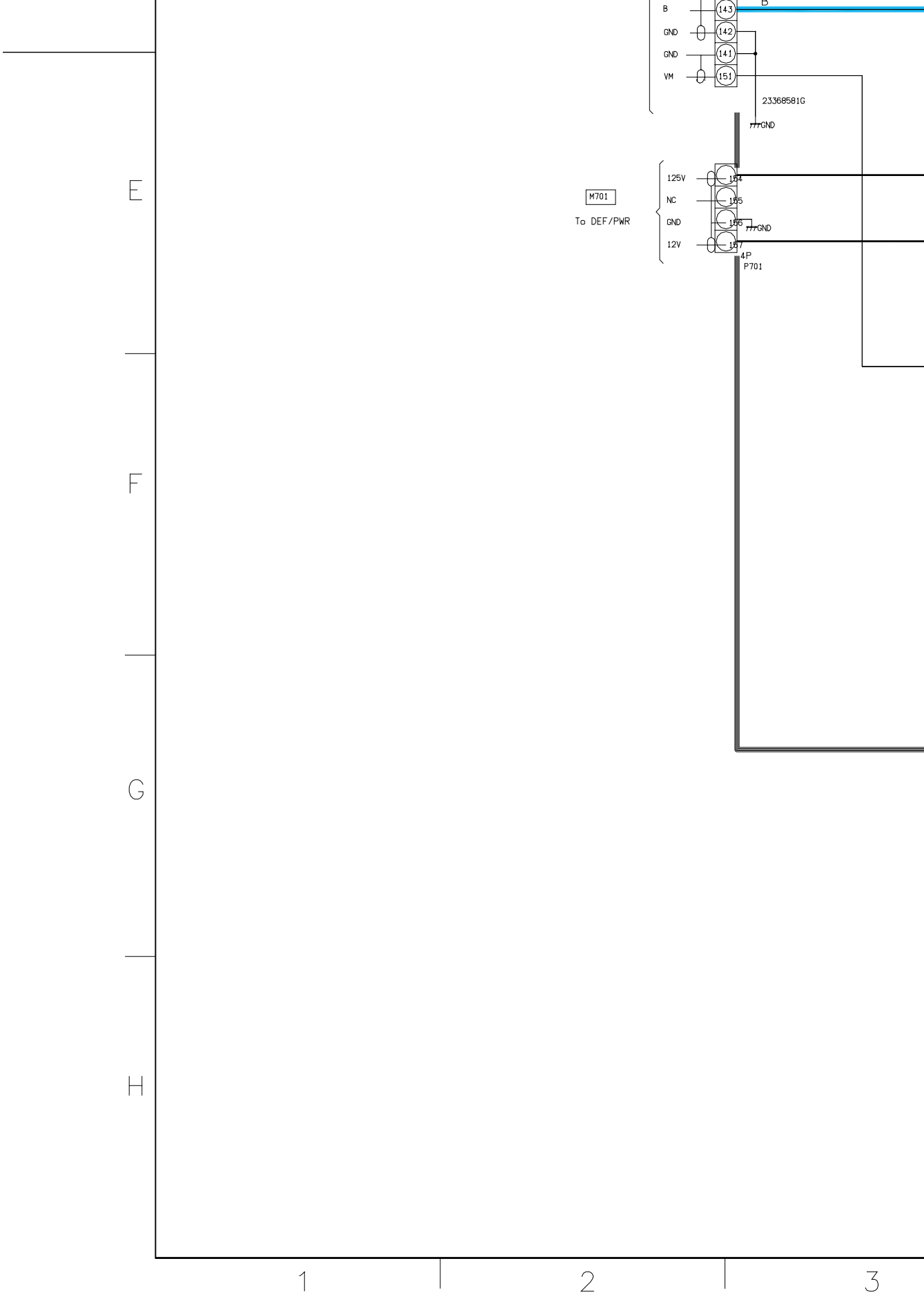

130(p-p)[H]

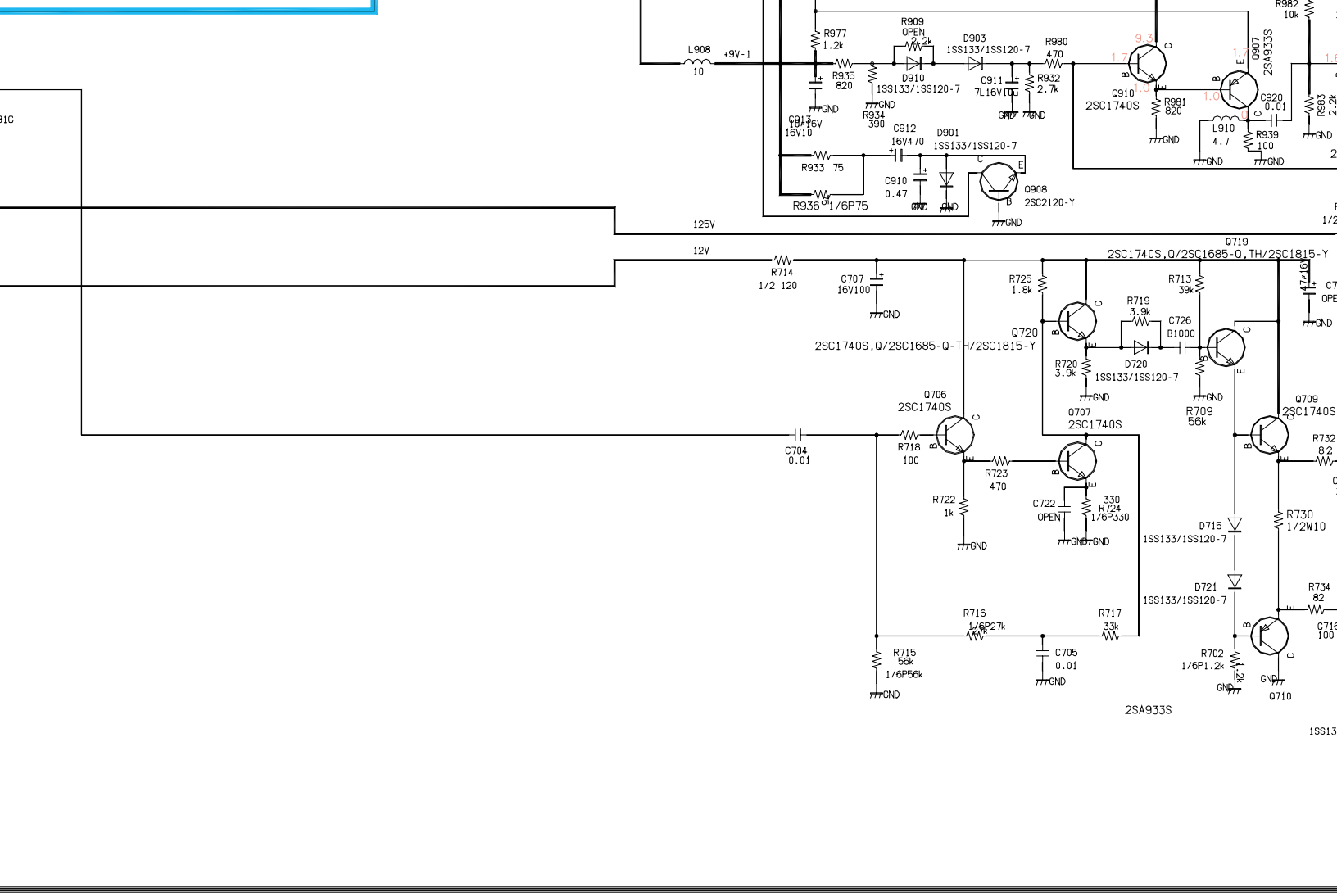
1 CRT/D.VM

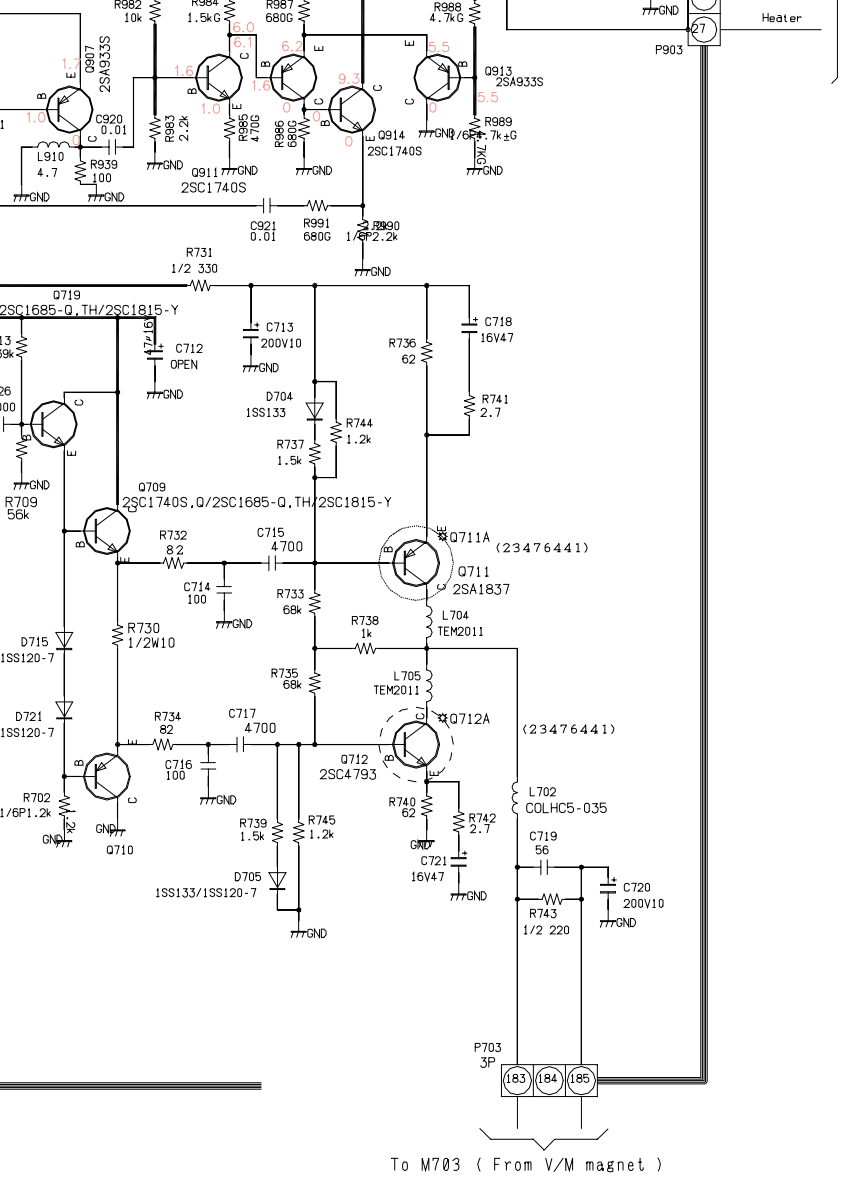

Q901A HEAT SINK (23476441)
Q903A HEAT SINK (23476441)
Q905A HEAT SINK (23476441)
Q921 OPEN
Q922 OPEN
D975 OPEN
Q920 OPEN
R951 OPEN
R994 OPEN
R940 OPEN
R952 OPEN
R957 OPEN
R993 OPEN
R950 OPEN
R923 OPEN
R997 OPEN
R955 OPEN
Q923 OPEN
C970 OPEN
R973 OPEN
R976 OPEN
TP-46R
R947 OPEN
Q924 OPEN
R978 OPEN
C971 OPEN
R998 OPEN
TP-46G
R948 OPEN
Q925 OPEN
R979 OPEN
C972 OPEN
R999 OPEN
TP-46B
R949 OPEN
R904 10k
R905 100
TP-47R
Q901 2SC4544
D907 1SS133/1SS120-7
Q901A OPEN
R912 OPEN
D912 MTZJ12A
D904 1SS133/1SS120-7
RED CUT OFF
R914 560
D902 2SC1815-Y
R916 1/6P100
R915 1/6P180
C903 OPEN
R918 82
R917 1/6P1k
C904 390
C914 0.01
Q903 2SC4544
Q903A OPEN
R919 OPEN
D911 MTZJ12A
D908 1SS133/1SS120-7
D905 1SS133/1SS120-7
GREEN CUT OFF
R921 560
Q904 2SC1815-Y
R946 1/6P100
R922 1/6P180
GREEN DRIVE
C906 OPEN
R924 82
R925 1/6P1k
C905 390
TP-47B
Q905 2SC4544
Q905A OPEN
R926 OPEN
D914 MTZJ12A
D909 1SS133/1SS120-7
D906 1SS133/1SS120-7
BLUE CUT OFF
R928 560
Q906 2SC1815-Y
R945 1/6P100
R929 1/6P180
BLUE DRIVE
C908 OPEN
R930 82
R937 1/6P1k
C907 390
R942 1/6P5.6k
R943 1/6P5.6k
R944 1/6P5.6k
L902 220u
L903 220u
L904 220u
L905
L908 10
+9V-1
R977 1.2k
R909 OPEN 2.2k
D903 1SS133/1SS120-7
R980 470
R935 820
D910 1SS133/1SS120-7
C911 7L16V10u
R932 2.7k
R934 390
C912 16V470
D901 1SS133/1SS120-7
C913 10/16V 16V10
Q907 2SA933S
Q910 2SC1740S
R981 820
C920 0.01
L910 4.7
R939 100
R982 10k
R983 2.2k
1.5A_Beige

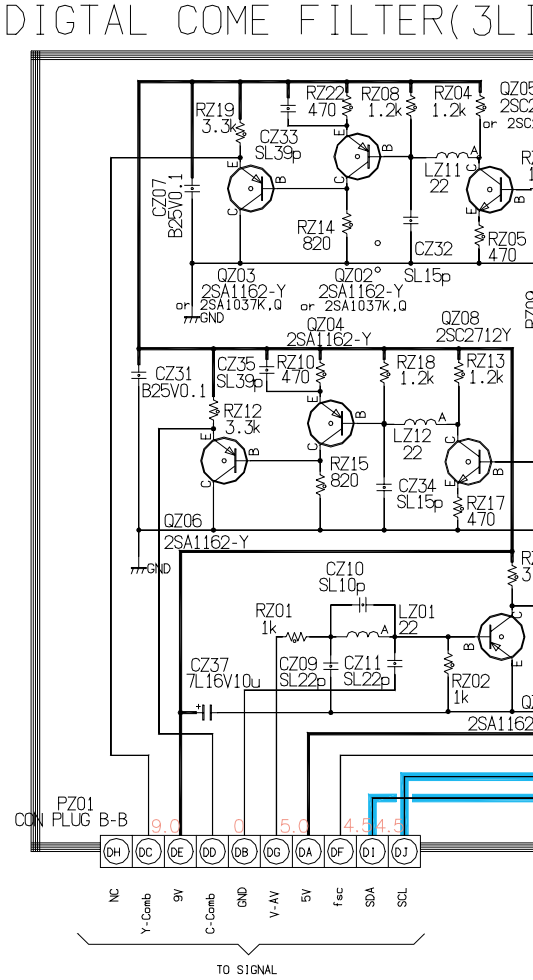

130(p-p)[H]
P900
PLUG 3P_5mm
186
187
188
C930
100
R942
1/6P5.6k
5.6k
R960
2R15k
R905
100
220u
L902
220u
R963
OPEN
L905
0.6
R901
R902
R903
R943
1/6P5.6k
5.6k
R961
2R15k
L906
0.6
L903
220u
R964
OPEN
V901
A90AJQ14X06
23312734
A80EJX011X11
23312904
EV
FV
MA
MA
T461
C400
L907
0.6
5.6k
R944
1/6P5.6k
5.6k
R962
2R15k
L904
220u
R965
OPEN
G980
1/2W15
V901A
ISD-35S-E
R906
P905
SV
CK45R1H102K
C992
1P
D911
1S1834
C931
OPEN
R992
15
(HEATER)
R920
2R1.8
C909 G900
250V22 0.6
200V
Q912
2SA933S
R982
10k
R984
1.5kG
R987
680G
R988
4.7kG
Q907
2SA933S
C920
0.01
R983
2.2k
R985
470G
R986
680G
Q913
2SA933S
R989
4.7k±G
L910
4.7
R939
100
Q911
2SC1740S
Q914
2SC1740S
P903
200V
NC
GND
GND
NC
NC
GND
Heater
M903
To DEF/PWR
GND


10
11
12
A
B
C
D

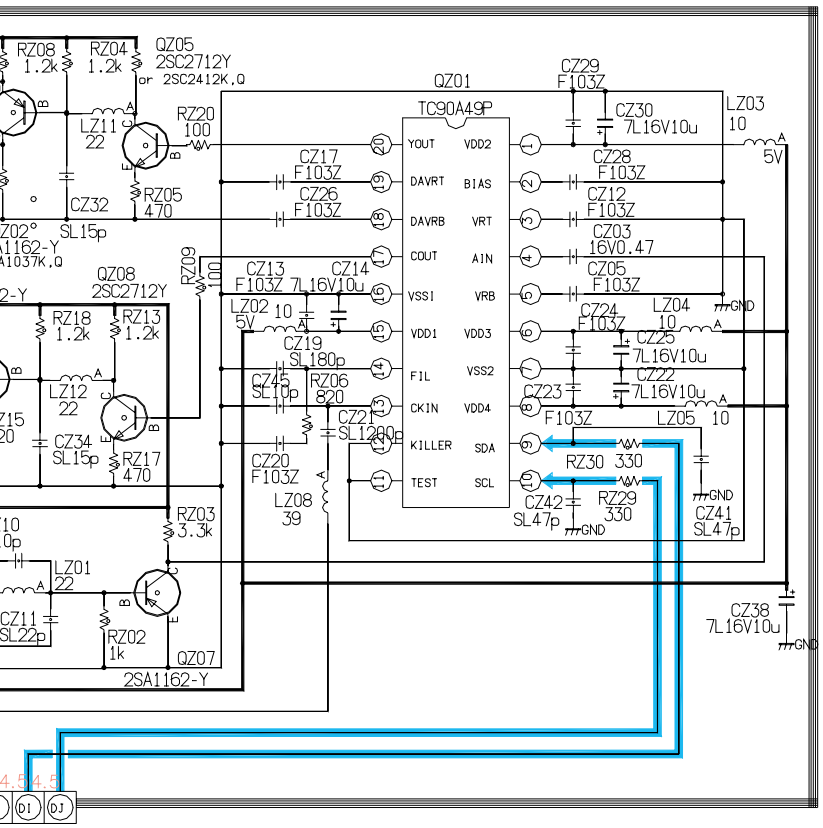

B
GND
GND
VM
143
142
141
151
23368581G
GND
125V
NC
GND
12V
154
155
156
157
GND
4P
P701
M701
To DEF/PWR
E
F
G
H
1
2
3


L908
10
+9V-1
R977
1.2k
R909
OPEN
2.2k
D903
1SS133/1SS120-7
R980
470
R935
820
D910
1SS133/1SS120-7
C911
7L16V100
R932
2.7k
R934
390
C912
16V470
D901
1SS133/1SS120-7
R933
75
C910
0.47
R936
1/6P75
Q908
2SC2120-Y
Q907
2SA933S
Q910
2SC1740S
R981
820
L910
4.7
R939
100
C920
0.01
R982
10k
R983
2.2k
125V
12V
Q719
2SC1740S,Q/2SC1685-Q,TH/2SC1815-Y
R714
1/2 120
C707
16V100
R725
1.8k
R719
3.9k
C726
B1000
R713
39k
Q720
2SC1740S,Q/2SC1685-Q-TH/2SC1815-Y
R720
3.9k
D720
1SS133/1SS120-7
R709
56k
Q706
2SC1740S
Q707
2SC1740S
Q709
2SC1740S
C704
0.01
R718
100
R723
470
R722
1k
C722
OPEN
R724
1/6P330
330
R732
82
D715
1SS133/1SS120-7
R730
1/2W10
D721
1SS133/1SS120-7
R734
82
R716
1/6P27k
R717
33k
R715
56k
1/6P56k
C705
0.01
R702
1/6P1.2k
Q710
2SA933S
1SS13


R982 10k
R984 1.5kG
R987 680G
R988 4.7kG
Heater
P903
27
Q907 2SA933S
Q913 2SA933S
C920 0.01
L910 4.7
R939 100
R983 2.2k
R985 470
R986 680G
R989 4.7k±G
Q911 2SC1740S
Q914 2SC1740S
C921 0.01
R991 680G
R990 2.2k
R731 1/2 330
Q719 2SC1685-Q,TH/2SC1815-Y
C712 OPEN
C713 200V10
C718 16V47
R736 62
R741 2.7
D704 1SS133
R744 1.2k
R737 1.5k
R709 56k
Q709 2SC1740S,Q/2SC1685-Q,TH/2SC1815-Y
R732 82
C715 4700
Q711A
(23476441)
Q711 2SA1837
C714 100
R733 68k
R738 1k
L704 TEM2011
D715 1SS120-7
R730 1/2W10
L705 TEM2011
D721 1SS120-7
R734 82
C717 4700
Q712A
(23476441)
C716 100
Q712 2SC4793
R702 1/6P1.2k
Q710
R739 1.5k
R745 1.2k
R740 62
R742 2.7
L702 COLHC5-035
C719 56
C721 16V47
D705 1SS133/1SS120-7
R743 1/2 220
C720 200V10
P703 3P
183
184
185
To M703 (From V/M magnet)


DIGTAL COME FILTER(3LI
RZ19 3.3k
RZ22 470
RZ08 1.2k
RZ04 1.2k
CZ33 SL39p
LZ11 22
CZ07 B25V0.1
RZ14 820
CZ32
RZ05 470
QZ03 2SA1162-Y or 2SA1037K,Q
QZ02 2SA1162-Y or 2SA1037K,Q
SL15p
QZ04 2SA1162-Y
QZ08 2SC2712Y
CZ31 B25V0.1
CZ35 SL39p
RZ10 470
RZ18 1.2k
RZ13 1.2k
RZ12 3.3k
LZ12 22
RZ15 820
CZ34 SL15p
RZ17 470
QZ06 2SA1162-Y
CZ10 SL10p
RZ01 1k
LZ01 22
CZ37 7L16V10u
CZ09 SL22p
CZ11 SL22p
RZ02 1k
PZ01 CON PLUG B-B
9.0
0
5.0
4.5
4.5
DH
DC
DE
DD
DB
DG
DA
DF
DI
DJ
NC
Y-Comb
9V
C-Comb
GND
V-AV
5V
fsc
SDA
SCL
TO SIGNAL

LTER(3LINE)



3L DIGI-COMB
CRT-D VM
32AF41

E F G H

10 11 12